CITY OF OAKLAND

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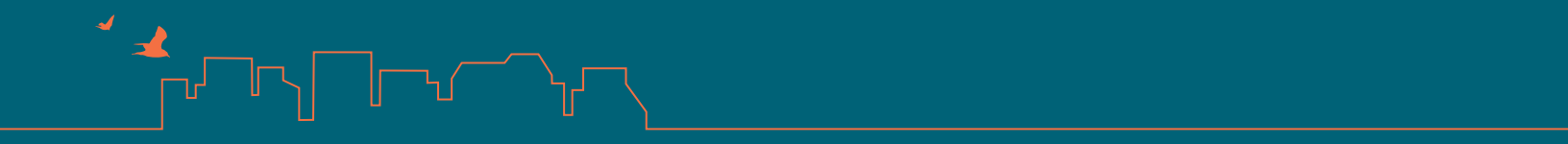


Viewcrest Estates Draft EIR

for the City of Oakland

PLACEWORKS

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OAKLAND



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W-Trans

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SOURCES

In addition to the technical appendices, all documents cited in this report and used in its preparation are hereby incorporated by reference into this Draft EIR. Copies of documents referenced herein are available for review online at https://www.oaklandca.gov/resources/current-environmental-review-ceqa-eir-documents-2011-present.

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1. Introduction

Pursuant to California Public Resources Code (PRC) Section 21080(d) (California Environmental Quality Act [CEQA] statute) and CEQA Guidelines Section 15378(a), the Viewcrest Estates Project is considered a "project" subject to environmental review because its approval is "an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment."[1, 2] This Draft Environmental Impact Report (Draft EIR) provides an assessment of the potential environmental consequences of approval and construction of the Viewcrest Estates Project, herein referred to as "proposed project." Additionally, this Draft EIR identifies mitigation measures and alternatives to the proposed project that would avoid or reduce significant impacts. This Draft EIR compares the development of the proposed project with the existing baseline condition, described in detail in Chapters 4.1 through 4.17. The City of Oakland (City) is the lead agency for the proposed project. This assessment is intended to inform the City's decision makers, any responsible and trustee agencies, and the public-at-large of the nature of the proposed project and its effect on the environment.

1.1 PROPOSED PROJECT

The proposed project would develop approximately 2.6 acres of a currently undeveloped 20-acre parcel in the eastern hills of Oakland into a cluster of detached single-family homes with associated landscaping and a new residential street. The remainder of the property would remain as open space.

Following approval by the City, the proposed project would clear existing vegetation from the proposed development area and grade the site for construction of a new cul-de-sac and ten detached single-family homes. The new residential street would be a cul-de-sac coming off of Campus Drive between the existing residential streets of Viewcrest Drive and Rockingham Court. The proposed project is described in more detail in Chapter 3, *Project Description*, of this Draft EIR.

1.2 EIR SCOPE

This document is a project-level Draft EIR (CEQA Guidelines Section 15161, *Project EIR*) that identifies and analyzes potential significant environmental impacts of the proposed project. As a project-level EIR, the environmental analysis describes the physical changes in the environment that would result from the development of the proposed project. This project-level EIR examines the specific short-term impacts (project construction) and long-term impacts (project operation) that would occur as a result of project

[1] The California Environmental Quality Act is in the California Public Resources Code, Division 13, Sections 21000–21177.
[2] The CEQA Guidelines are in the California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387.

approval. The scope of this EIR was established by the City through the scoping process. For a complete listing of environmental topics covered in this Draft EIR, see Chapter 4, *Environmental Analysis*.

1.3 ENVIRONMENTAL REVIEW PROCESS

1.3.1 DRAFT EIR

Pursuant to CEQA Guidelines Section 15063, *Initial Study*, the City determined that the proposed project could result in potentially significant environmental impacts and that an EIR is required. In compliance with PRC Section 21080.4, the City circulated the Notice of Preparation (NOP) of an EIR for the proposed project to the Office of Planning and Research State Clearinghouse and interested agencies and persons on June 19, 2020, for a 32-day review period. The State Clearinghouse posted the NOP with a start date of June 19, 2020, and an end date of July 20, 2020. A virtual public Scoping Meeting was held on July 1, 2020. The NOP and scoping process solicited comments from interested parties regarding the scope of the Draft EIR. Appendix A, *Notice of Preparation and Scoping Comments*, of this Draft EIR, contains the NOP as well as the comments received by the City in response to the NOP.

The Public Draft EIR will be available for review by the public and interested parties, agencies, and organizations for a 45-day comment period. During the comment period, the public is invited to submit written or email comments on the Draft EIR to the City of Oakland Bureau of Planning. Written comments should be submitted to:

Richard Walker, Contract City Planner
City of Oakland, Bureau of Planning
250 Frank H. Ogawa, Suite 2114
Oakland, CA 94612
rwalker@interwestgrp.com
(424) 404-7504

1.3.2 FINAL EIR

Following the conclusion of the 45-day public review period for the Draft EIR, the City will review all comments received and prepare written responses to comments on environmental issues. A Final EIR will be prepared that contains all the comments received, responses to comments raising environmental issues, and changes to the Draft EIR (if necessary). The Final EIR will be presented to the Planning Commission for certification. All agencies, organizations, and individuals who commented on the Draft EIR will be notified of the availability of the Final EIR and the date of the public hearing before the Planning Commission.

Responses to comments submitted on the Draft EIR by public agencies will be provided to those agencies at least ten days prior to certification of the EIR. Prior to the approval of the proposed project, the City must certify that the Final EIR was completed in compliance with CEQA and make findings regarding each significant environmental effect of the proposed project identified in the Final EIR. The Final EIR will need

to be certified as having been prepared in compliance with CEQA by the City prior to making a decision to approve or deny the proposed project. Public input is encouraged at all public hearings before the City.

If the Final EIR is certified, it may then consider whether to approve the Viewcrest Estates Project. If the proposed project is approved, the City would adopt and make conditions of project approval all feasible mitigation measures identified in the EIR. Project entitlements and the Final EIR may be appealable to City Council.

In some cases, the City may find that certain mitigation measures are within the responsibility and jurisdiction of other public agencies to implement, not the City, or that no feasible mitigation measures have been identified for a significant impact. In that case, the City may nonetheless determine that economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable, significant effects on the environment.

1.3.3 MITIGATION MONITORING

PRC Section 21081.6 requires that the lead agency adopt a mitigation monitoring and reporting program (MMRP) for any project for which it has adopted mitigation measures. The MMRP ensures compliance with the adopted mitigation measures during project implementation. The MMRP for the proposed project will be completed as part of the environmental review process.

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2. Executive Summary

This chapter presents an overview of the proposed Viewcrest Estates Project, herein referred to as the "proposed project." This executive summary also provides a list of each significant impact with recommended mitigation measures and required standard conditions of approval, a summary of the alternatives to the proposed project, issues to be resolved, areas of controversy, and conclusions of the analyses in Chapters 4.1 through 4.17 of this Draft Environmental Impact Report (Draft EIR). For a complete description of the proposed project and the alternatives to the proposed project, see Chapter 3, *Project Description*, and Chapter 5, *Alternatives to the Proposed Project*, of this Draft EIR, respectively.

This Draft EIR addresses the significant environmental effects associated with the implementation of the proposed project. The California Environmental Quality Act (CEQA) requires that public agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An EIR is a public document designed to provide the public and public agency decision-makers with an analysis of the potential environmental consequences of the proposed project to support informed decision-making.

This Draft EIR has been prepared pursuant to the requirements of CEQA, the CEQA Guidelines, and the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, to determine whether approval of the proposed project could have a significant effect on the environment (i.e., significant impact).[1, 2, 3] The City of Oakland, as the lead agency, has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable City technical personnel and review of all technical subconsultant reports. Information for this Draft EIR was obtained from on-site field observations; discussions with affected agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g., air quality, hazards and hazardous materials, hydrology and water quality, noise, and transportation).

2.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the significant environmental effects associated with the construction and operation of the proposed project. The main purposes of this document as established by CEQA are:

[1] The CEQA Statute is found at California Public Resources Code, Division 13, Sections 21000 to 21177.
[2] The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 to15387.
[3] City of Oakland, December 16, 2020, *CEQA Thresholds of Significance Guidelines*.

- To disclose to decision-makers and the public the significant environmental effects of proposed activities.
- To identify ways to avoid or reduce environmental damage.
- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- To disclose to the public the reasons for agency approval of projects with significant environmental effects.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in CEQA and the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a project that has the potential to result in significant adverse environmental impacts. An EIR is also one of various decision-making tools used by a lead agency to consider the environmental impacts of a project that is subject to its discretionary authority. Prior to approving a project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in compliance with CEQA, find that the EIR reflects the independent judgment of the lead agency, adopt findings concerning each of the project's significant environmental impacts, mitigation measures and alternatives, and must adopt a Statement of Overriding Considerations finding that specific overriding benefits of the project outweigh the significant environmental if the project would result in significant impacts that cannot be avoided.

2.1.1 REPORT ORGANIZATION

This Draft EIR is organized into the following chapters:

- Chapter 1: Introduction. Describes the purpose of this Draft EIR, background of the proposed project, the Notice of Preparation (NOP), the use of incorporation by reference, and Final EIR certification.
- Chapter 2: Executive Summary. Summarizes the background and description of the proposed project, the format of this Draft EIR, the environmental consequences that would result from the proposed project, the alternatives to the proposed project, the recommended mitigation measures, the required standard conditions of approval, and indicates the level of significance of environmental impacts with and without mitigation.
- Chapter 3: Project Description. Provides a detailed description of the proposed project location and the environmental setting on and surrounding the project site, the proposed project, the objectives of the proposed project, approvals anticipated being included as a part of proposed project, and the intended uses of this EIR.
- Chapter 4: Environmental Analysis. This chapter is organized by the environmental resource categories identified in the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, which implement and supplement provisions in the CEQA Guidelines for determining significance of environmental effects, including CEQA Guidelines Sections 15064, 15064.4, 15064.5, 15064.7, 15065, 15382, and CEQA Guidelines Appendix G, *Environmental Checklist*. Chapters 4.1 through 4.17 provide a

description of the physical environmental conditions as they existed at the time the NOP was published, from both a local and regional perspective; an analysis of the potential environmental impacts of the proposed project; and recommended mitigation measures, if required, to lessen or avoid significant impacts. The environmental setting in each chapter provides baseline physical conditions from which the City will determine the significance of environmental impacts resulting from the proposed project. Each chapter also contains a description of the thresholds of significance used to determine whether a significant impact would occur; relevant standard conditions of approval that are required by the City; the methodology used to identify and evaluate the potential significant impacts of the proposed project; and the potential significant cumulative impacts to which the proposed project provides a cumulative contribution.[4]

- Chapter 5: Alternatives to the Proposed Project. Provides an evaluation of alternatives to the proposed project, including the required "No Project" alternative, and identifies the environmentally superior alternative.
- Chapter 6: CEQA-Required Assessment Conclusions. Discusses growth inducement, cumulative impacts, significant unavoidable effects, and significant irreversible changes as a result of the proposed project. Additionally, this chapter identifies environmental issues that were determined not to require further environmental review during the scoping process pursuant to CEQA Guidelines Section 15128, *Effects Not Found to be Significant*.
- Chapter 7: Organizations and Persons Consulted. Lists the people and organizations that contributed to the preparation of this EIR for the proposed project.
- Chapter 8: Acronyms and Abbreviations. Lists the common acronyms and abbreviations in this Draft EIR.
- Appendices: The appendices for this document contain the following supporting documents:
  - Appendix A: Notice of Preparation and Scoping Comments
  - Appendix B: Air Quality and Greenhouse Gas Emissions Data
  - Appendix C: Construction Health Risk Assessment
  - Appendix D: Biological Resources
  - Appendix E: Arborist Report
  - Appendix F: Cultural Resources Study
  - Appendix G: Creek Protection Plan and Hydrology Report
  - Appendix H: Noise Data
  - Appendix I: Transportation Impact Analysis
  - Appendix J: Standard Conditions of Approval
  - Appendix K: Preliminary Geotechnical Report

[4] The City of Oakland Department of Planning and Building, Bureau of Planning, Standard Conditions of Approval were adopted by Oakland City Council on November 3, 2008, under Ordinance No. 12899 C.M.S and revised on December 16, 2020.

2.1.2 TYPE AND PURPOSE OF THIS DRAFT EIR

According to Section 15121(a) of the CEQA Guidelines, the purpose of an EIR is to:

> Inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This Draft EIR has been prepared as a project-level EIR, pursuant to CEQA Guidelines Section 15161, *Project EIR*. As a project-level EIR, the environmental analysis will discuss the changes in the environment that would result from the construction and operation of the Viewcrest Estates Project. This project-level EIR will examine the specific short-term impacts (project construction) and long-term impacts (project operation) that would occur as a result of project approval by the City of Oakland, as well as cumulative impacts.

2.2 SUMMARY OF PROPOSED PROJECT

The proposed project would develop approximately 2.6 acres of a currently undeveloped, 20-acre parcel in the eastern hills of Oakland into a cluster of single-family homes with associated landscaping and new residential street. The remainder of the property, approximately 17.4 acres, would be maintained in perpetuity by the developer and/or their successor entity as conservation open space.

Following approval by the City of Oakland, the proposed project would clear existing vegetation from the proposed development area and grade the site for construction of a new cul-de-sac and ten detached single-family homes. The new residential street would be a cul-de-sac coming off of Campus Drive between the existing residential streets of Viewcrest Drive and Rockingham Court. The proposed project is described in more detail in Chapter 3, *Project Description*, of this Draft EIR.

2.3 ALTERNATIVES TO THE PROPOSED PROJECT

This Draft EIR analyzes alternatives to the proposed project that are designed to reduce the significant environmental impact of the proposed project and feasibly attain most of the basic objectives of the proposed project. CEQA Guidelines Section 15126.6(d) requires the alternatives analysis to include sufficient information about each alternative to allow a comparison with the proposed project. While there is no set methodology for comparing the alternatives, this can be accomplished by using a matrix. CEQA Guidelines Section 15126.6(2)(2) requires the EIR to identify the environmentally superior alternative. Identification of the environmentally superior alternative involves comparing the environmental effects of the alternatives with the environmental effects of the proposed project. The following alternatives to the proposed project were considered and analyzed:

- No Project Alternative
- Alternate Site Plan Alternative

Chapter 5, *Alternatives to the Proposed Project*, of this Draft EIR, includes a complete discussion of these alternatives and of alternatives that were considered but rejected from further analysis. As discussed in Chapter 5, the Alternate Site Plan Alternative would be the environmentally superior alternative.

2.4 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the City of Oakland, as lead agency, related to:

- Whether this Draft EIR adequately describes the environmental impacts of the proposed project.
- Whether the identified mitigation measures should be adopted.
- Whether there are alternatives to the proposed project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic objectives.

2.5 AREAS OF CONCERN

The City of Oakland issued a NOP for the EIR on June 19, 2020, and held a scoping meeting on July 1, 2020, to receive scoping comments. During the 32-day scoping period for this EIR, which concluded on July 20, 2020, public agencies and members of the public were invited to submit comments as to the scope and content of the EIR. The City received over 100 letters in addition to comments made at the July 1st scoping meeting. Every environmental concern applicable to the CEQA process is addressed in this Draft EIR, but comments received primarily focused on the following environmental issues:

- Air quality and noise impacts during construction
- Geologic hazards related to landslides and slope instability
- Wildlife and habitat impacts from tree removal and development
- Hydrology concern related to runoff and flooding
- Aesthetics and view blockage from existing houses by new houses and retaining wall
- Increase in traffic to area and resulting greenhouse gas emissions
- Capacity of water and wastewater systems
- Shadows and privacy on downslope neighbors
- Sulfur mine hazard
- Wildfire hazards and emergency evacuation routes

Comments received during the public scoping period, including oral comments received at the July 1, 2020, scoping meeting, are in Appendix A, *Notice of Preparation and Scoping Comments*, of this Draft EIR. To the extent that these comments address environmental issues, they are addressed in Chapters 4.1 through 4.17 of this Draft EIR. Where comments include topics that are outside of the purview of the analysis required under CEQA, they will be addressed by City staff during the approval process for the proposed project, and therefore are not addressed in this Draft EIR.

In response to comments received on the NOP, the project applicant reduced the original 20-unit townhome development to ten single-family homes to reduce potential impacts related to the commenters' concerns about the increase in vehicle miles traveled and its impacts to air quality, greenhouse gas emissions, and noise, and wildfire risk and evacuation. As demonstrated in Chapters 4.1 through 4.17 of this Draft EIR, the impacts of the proposed ten-unit project are all less than significant or less than significant with mitigation as a result of the substantial reduction in project density that the project applicant agreed to voluntarily.

2.6 ENVIRONMENTAL IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Under CEQA, a significant effect (impact) on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance. Based on the project's location, it was determined that development of the proposed project would not result in significant environmental impacts for the following topic areas and therefore, impacts related to these topics are not analyzed further in this Draft EIR:

- Agricultural and Forestry Resources
- Mineral Resources

At the end of this chapter, Table 2-1, *Summary of Significant Impacts with Standard Conditions of Approval and Mitigation Measures,* presents a summary of significant impacts, required standard conditions of approval, and recommended mitigation measures concluded through the environmental analysis in this Draft EIR. The table is arranged in three columns: 1) impact statement; 2) required standard conditions of approval and recommended mitigation measures; and 3) resulting level of significance. As shown in Table 2-1, the significant impacts would be reduced to a less-than-significant level if the mitigation measures recommended in this Draft EIR are implemented.

Table 2-2, *Summary of Less Than Significant Impacts with Standard Conditions of Approval*, presents a summary of impacts that would be less than significant through implementation of the City's required Standard Conditions of Approval.

For a complete description of potential impacts, please refer to the specific discussions in Chapters 4.1 through 4.17 of this Draft EIR.

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
Biological Resources (BIO)		
Impact BIO-1.1: Project site preparation (clearing and grading) during the construction phase on the proposed 2.6-acre development area and on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) would adversely affect the occurrences of Oakland star tulip.	**Mitigation Measure BIO-1.1a:** The project applicant shall preserve the 17.4-acre portion of the project site as conservation open space in perpetuity for the protection of sensitive natural communities and special status species. No actions that will materially impair the character of the 17.4 acres of conservation open space would be permitted. This includes activities that may destroy the unique physical and scenic characteristics of the land, such as the cutting of timber, trees, and other natural growth, except as may be required for fire prevention, thinning, elimination of diseased growth, and similar protective measures. Any required vegetation clearing shall be performed by hand. No future trails or recreational features would be permitted for use by the future Homeowners Association (HOA) or other community members. The future HOA would be responsible for posting and maintaining signage informing the HOA members of the no-access requirement due to sensitive biological habitat. Prior to issuance of building permits, the project applicant shall provide proof of the permanent conservation to the satisfaction of the City of Oakland, for example, by formalizing the land as a conservation easement pursuant to California Civil Code Section 815, if feasible, or if not feasible, as determined by the City of Oakland, the project applicant shall enter into an agreement with the City of Oakland as to the proof of the permanent conservation of the 17.4 acres to be maintained by the future HOA as described in this mitigation measure. **Mitigation Measure BIO-1.1b:** Adequate measures shall be taken to address the loss of occurrences of Oakland star tulip in the proposed development area on the project site. This shall be accomplished by taking the following steps: ▪ An Oakland Star Tulip Relocation and Maintenance Plan (OST Plan) shall be prepared by a qualified botanist or habitat restoration specialist for review and approval by the City. ▪ The OST Plan shall define how individual plants within the proposed limits of grading and disturbance shall be salvaged and transplanted to the vicinity of the spur ridge known to support Oakland star tulip to the south of the proposed development area. ▪ Individual Oakland star tulip plants shall be salvaged and transplanted at the appropriate time of the year to maximize their chances for successful re-establishment based on successful relocation programs, and shall be installed in a manner that minimizes potential disturbance to the existing Oakland star tulip plants at that location. ▪ The OST Plan shall include details on monitoring and maintenance that shall be performed for a minimum of five years. This shall include annual surveys to determine success of relocation and re-establishment, as well as the need for necessary maintenance activities. ▪ The area used for transplanting relocated Oakland star tulip plants shall be treated for invasive species removal, as called for in the Maintenance and Monitoring Plan in Mitigation Measure BIO-1.3, to prevent the establishment and spread of invasive species that could otherwise occupy the area and create conditions unsuitable for Oakland star tulip. Together with permanent protection of the southern known occurrence of Oakland star tulip in the open space area on the project site, the OST Plan would serve to adequately address potential impacts on this species.	LTS/M

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
Impact BIO-1.2: Removal of trees during project construction or as part of future fire fuel management activities on the proposed 2.6-acre development area and on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) may result in the inadvertent destruction of active bat roosts.	**Mitigation Measure BIO-1.2a:** Implement Mitigation Measure BIO-1.1a. **Mitigation Measure BIO-1.2b:** Adequate measures shall be taken to avoid inadvertent take of special-status bat species if present in trees within the proposed development area on the project site. This shall be accomplished by taking the following steps: ▪ A qualified biologist shall visually inspect trees to be removed for bat roosts within seven days prior to their removal. The biologist shall look for signs of bats, including sightings of live or dead bats, bat calls or squeaking, the smell of bats, bat droppings, grease stains or urine stains around openings in trees, or flies around such openings. Trees with multiple hollows, crevices, forked branches, woodpecker holes, or loose and flaking bark have the highest chance of occupation and shall be inspected the most carefully. ▪ If signs of bats are detected, confirmation on presence or absence shall be determined by the qualified biologist, which may include night emergency or acoustic surveys. ▪ Due to restrictions of the California Health Department, direct contact by workers with any bat is not allowed. The qualified bat biologist shall be contacted immediately if a bat roost is discovered during project construction. ▪ If an active maternity roost is encountered during the maternity season (April 15 to August 31), the California Department of Fish and Wildlife shall be contacted for direction on how to proceed, and an appropriate exclusion zone shall be established around the occupied tree or structure until young bats are old enough to leave the roost without jeopardy. The size of the buffer shall take into account: ▪ Proximity and noise level of project activities. ▪ Distance and amount of vegetation or screening between the roost and construction activities. ▪ Species-specific needs, if known, such as sensitivity to disturbance.	LTS/M
Impact BIO-1.3: Removal of trees and dense vegetative cover during project construction or as part of future fire fuel management activities on the proposed 2.6-acre development area and on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) may result in the inadvertent destruction of active nests of San Francisco dusky-footed woodrat.	**SCA-47. Designated Very High Fire Severity Zone – Vegetation Management:** a) Vegetation Management Plan Required: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures: i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically; ii. Removal of leaves and needles from roofs and rain gutters; iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure; iv. Trimming back vegetation around windows; v. Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on slopes of 5 to 20% and within 100 feet or to the property line on slopes greater than	LTS/M

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
	20%. vi. All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk; vii. Clearing out ground-level brush and debris; and All non-ornamental plants, seasonal weeds & grasses, brush, leaf litter and debris within 30 feet of the residential structure shall be cut, raked and removed from the parcel. viii. Stacking woodpiles away from structures at least 20 feet from residential structures. ix. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species. b) Fire Safety Prior to Construction: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6" or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code. c) Fire Safety During Construction: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per Section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition. d) Smoking Prohibition: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code. **Mitigation Measure BIO-1.3a:** Implement Mitigation Measure BIO-1.1a. **Mitigation Measure BIO-1.3b:** Adequate measures shall be taken to avoid inadvertent take of San Francisco dusky-footed woodrats on the project site. This shall be accomplished by taking the following steps, which shall be incorporated into the project-specific Vegetation Management Plan pursuant to Standard Condition of Approval 47(a)(ix): ▪ A qualified biologist shall be retained to conduct a preconstruction survey for San Francisco dusky-footed woodrats, to determine whether any stick nests are present in the vicinity of proposed vegetation removal and development. The survey shall be performed within 30 days prior to initiation of vegetation removal and grading in the proposed development area or at least seven days before fire fuel management activities involving the removal of brush and trees in the open space area. ▪ If any nests are encountered within the limits of proposed grading and vegetation removal in the proposed development area, a trapping and relocation effort shall be conducted outside the breeding season (March 1 through August 31) to ensure any young are not inadvertently lost due to the destruction of the protective nest.	

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
	▪ Any nests within the construction zone of the proposed 2.6-acre development area shall be relocated to locations provided as undeveloped conservation open space and individual woodrats released into their relocated nests. The trapping and relocation effort shall preferably be conducted within seven days prior to grubbing and vegetation removal to prevent individual woodrats from moving back into the construction zone. ▪ Any nests detected in areas of brush and trees to be treated as part of fire fuel management in the proposed 17.4-acre conservation open space area shall be flagged by the qualified biologist and a training performed with workers in advance of any vegetation treatment explaining that the nest and any vegetation within 15 feet of the nest shall be left undisturbed with the exception of hand removal of any invasive species such as French broom plants or Monterey pine saplings.	
Impact BIO-1.4a: Removal of vegetative cover and other construction activities could result in the inadvertent take of Alameda whipsnake in the remote instance that an individual snake were to disperse into the proposed development area.	**SCA-31. Alameda Whipsnake Protection Measures:** a) Pre-Construction Survey Required. The project applicant shall hire a qualified biologist to conduct an Alameda whipsnake survey to identify the potential presence of Alameda whipsnakes at the project site. If the presence of Alameda whipsnakes is confirmed, the whipsnakes shall be captured and relocated away from the construction area by a qualified biologist in accordance with all applicable regulations and guidelines. The biologist shall submit the results of the survey (and capture/relocation if applicable) to the City for review and approval. b) Information and Protocols for Construction Workers. The biologist from section (a) above shall instruct the project superintendent and the construction crews (primarily the clearing, demolition, and foundation crews) of the potential presence, status, and identification of Alameda whipsnakes. The biologist shall also establish a set of protocols for use during construction concerning the steps to take if a whipsnake is seen on the project site, including who to contact, to ensure that whipsnakes are not harmed or killed. The project applicant shall submit evidence of compliance with these requirements to the City for review and approval. c) Alameda Whipsnake Exclusion Fence. Unless alternative (equivalent or more effective) measures are recommended by the biologist, the project applicant shall install a solid fence to prevent whipsnakes from entering the work site. The snake exclusion fence shall be constructed as follows: i. Plywood sheets at least three feet in height, above ground. Heavy duty geotextile fabric approved by the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife may also be used for the snake exclusion fence; ii. Buried four to six inches into the ground; iii. Soil back-filled against the plywood fence to create a solid barrier at the ground; iv. Plywood sheets maintained in an upright position with wooden or masonry stakes; v. Ends of each plywood sheet overlapped to ensure a continuous barrier; and vi. Work site or construction area shall be completely enclosed by the exclusion fence or approved traps shall be installed at the ends of exclusion fence segments to allow capture and relocation of Alameda whipsnake away from the construction area by a qualified biologist. The location and design of the proposed exclusion fence shall be submitted for review and approval by the City and be included on plans for all construction-related permits.	LTS/M

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
	d) Alameda Whipsnake Protection During Construction. The project applicant shall comply with the requirements in the above sections during construction activities. The approved protocol from section (b) above shall be followed in the event Alameda whipsnakes are encountered. The snake exclusion fence from section (c) above shall be installed and remain in place throughout the construction period. All construction activities and equipment/materials/debris storage shall take place on the project-side of the exclusion fence. **Mitigation Measure BIO-1.4a:** Adequate measures shall be taken to avoid inadvertent take of Alameda whipsnake. This shall be accomplished through implementation of Standard Condition of Approval 31 (SCA-31), *Alameda Whipsnake Protection Measures*, together with the following provisions: ▪ A qualified biologist shall be retained by the applicant to oversee construction and ensure that no inadvertent take of Alameda whipsnake occurs as a result of grading and other habitat modifications to the proposed development area on the project site. ▪ A qualified biologist shall be retained by the applicant to oversee initial vegetation clearing and installation of wildlife exclusionary fencing to prevent Alameda whipsnake from entering the construction area. The wildlife exclusionary fencing material and design shall meet with latest standards called for by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), rather than use of plywood, as specified in SCA-31, *Alameda Whipsnake Protection Measures*, and shall include one-way funnels to allow snakes and other small wildlife to exit the fenced construction zone. The exclusionary fencing shall be maintained and remain in place for the duration of construction until the qualified biologist has determined that it is no longer needed. ▪ Vegetation clearing shall be performed by hand prior to installation of the wildlife exclusionary fencing to allow Alameda whipsnake to disperse from the potential development area. Vegetation removal shall be initiated from the Campus Drive frontage and proceed southward across the proposed development area. All vegetation debris shall be removed from the construction zone on a daily basis to remove any protective cover that could attract snakes and other wildlife. Operation of grading equipment shall not occur until vegetative cover has been completely removed, the entire proposed development area has been denuded and then isolated with installation of the wildlife exclusionary fencing, and the qualified biologist has performed a pre-grading survey to confirm absence of any Alameda whipsnake within the proposed development area. ▪ During the construction phase of the project, the qualified biologist or on-site monitor trained by the qualified biologist, such as the construction foreman, shall check to ensure that the exclusionary fencing is intact. The fenced construction area shall be inspected by the qualified biologist or trained on-site monitor each morning and evening of construction activities for possible presence of Alameda whipsnake. This includes checking holes, under vehicles, and under boards left on the ground. ▪ During construction, any holes or trenches greater than six inches in depth shall be covered with plywood or similar non-heat-conductive materials, and larger trenches that cannot be readily covered shall be equipped with ramps at the end of each workday to allow escape of any animals. ▪ Use of monofilament plastic for erosion control or other practices shall be prohibited on the project site to prevent possible entrainment. ▪ All food waste shall be removed daily from the project site to avoid attracting predators.	

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
	▪ If any Alameda whipsnake are found within the proposed development area, construction shall be halted until they disperse naturally, and the on-site monitor shall immediately notify the qualified biologist and representatives of the USFWS and CDFW. Construction shall not proceed until adequate measures are taken to prevent dispersal of any individuals into the construction zone, as directed by the USFWS and CDFW. Subsequent recommendations made by the USFWS and CDFW necessary to avoid take of Alameda whipsnake shall be followed. Only an agency-approved biologist is allowed to handle or otherwise direct movement of Alameda whipsnake, and all others shall not handle or otherwise harass the animal(s). The qualified biologist and the on-site monitor shall be aware of all terms and conditions set by USFWS and CDFW on the project, if that becomes necessary.	
Impact BIO-1.4b: Future fire fuel management activities on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) has the potential to result in the inadvertent take of the Alameda whipsnake.	**SCA-47. Designated Very High Fire Severity Zone – Vegetation Management:** a) Vegetation Management Plan Required: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures: i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically; ii. Removal of leaves and needles from roofs and rain gutters; iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure; iv. Trimming back vegetation around windows; v. Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on slopes of 5 to 20% and within 100 feet or to the property line on slopes greater than 20%. vi. All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk; vii. Clearing out ground-level brush and debris; and All non-ornamental plants, seasonal weeds & grasses, brush, leaf litter and debris within 30 feet of the residential structure shall be cut, raked and removed from the parcel. viii. Stacking woodpiles away from structures at least 20 feet from residential structures. ix. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species.	LTS/M

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
	b) Fire Safety Prior to Construction: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6" or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code. c) Fire Safety During Construction: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per Section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition. d) Smoking Prohibition: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code. **Mitigation Measure BIO-1.4b1:** Implement Mitigation Measure BIO-1.1a. **Mitigation Measure BIO-1.4b2:** The project applicant shall retain a qualified biologist to prepare an Alameda Whipsnake Maintenance and Management Program (AWMMP) for the 17.4 acres of the project site to be provided as conservation open space shall for review and approval by the City. The AWMMP shall address annual removal of invasive species, required fire fuel management, and other activities that could affect existing habitat for Alameda whipsnake within the permanent open space area. The AWMMP shall be incorporated into the project-specific Vegetation Management Plan pursuant to Standard Condition of Approval 47(a)(ix). The AWMMP shall be prepared with input from a qualified biologist and shall include the following components: ▪ Maintenance and management activities shall include annual removal of invasive species, such as French broom (*Genista monspessulana*), sweet fennel (*Foeniculum vulgare*), and cotoneaster (*Cotoneaster pannosus*), pampas grass (*Cortaderia jubata*), and poison hemlock (*Conium maculatum*), as well as sapling pines (*Pinus* spp.) with trunk diameters under 10 inches diameter at breast height, all of which are spreading through various locations on this portion of the project site and pose a threat to its future habitat quality. ▪ The AWMMP shall specify methods for treatment and removal, identify a schedule for annual inspection and treatment, and include triggers for retreatment when target invasive species are detected. ▪ All workers performing maintenance activities within the open space area shall be trained in advance by a qualified biologist over the possible presence of Alameda whipsnake, what this species looks like and its protected status, that it must not be captured or harassed, and what to do regarding avoidance if they suspect one is present in an area where vegetation management is being performed to allow the snake to disperse on its own with no disturbance. ▪ The AWMMP shall incorporate any requirements or controls specified by the United States Fish and Wildlife Services and/or the California Department of Fish and Wildlife as part of possible consultations with these agencies given the state and federal-listing status of Alameda whipsnake.	

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
Hydrology and Water Quality (HYD)		
Impact HYD-1: Uncontrolled erosion and sedimentation could have negative effects on water quality.	**SCA-43. Hazardous Materials Related to Construction:** The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a) Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b) Avoid overtopping construction equipment fuel gas tanks; c) During routine maintenance of construction equipment, properly contain and remove grease and oils; d) Properly dispose of discarded containers of fuels and other chemicals; e) Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f) If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate. **SCA-50. State Construction General Permit:** The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City. **Mitigation Measure HYD-1:** To protect water quality and minimize impacts to the ephemeral creek south of the proposed development area, the project contractor shall implement the following: ▪ Prior to the start of construction, the project manager shall hold a training session for the construction crew explaining the prohibition on the discharging of construction debris, materials, and trash to the creek channel, including its banks. Each day prior to leaving the site, the project manager/foreman shall walk the site perimeter to check for discarded debris and trash, removing whatever is found to a secure location for disposal. ▪ Viewcrest Drive shall be swept clean after each day of construction to remove sediment discharged or tracked to the roadway by equipment and crew traffic to and from the work area. The collected sediment, trash, and other debris shall be contained in covered trash barrels or debris boxes, secured against overturning, and protected from urban wildlife (e.g., raccoons, deer). The contents of these barrels shall be off hauled to a legitimate waste depository at whatever frequency is required to maintain a clean work area.	LTS/M

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
	▪ Immediately prior to construction, the contractor shall install silt fencing outside and downslope of the structure between the structure and the slope break to the immediate channel area. The fencing shall be installed pursuant to the manufacturer's guidelines. It shall remain in place until the residential construction is completed, then disposed of properly or repurposed off-site. ▪ During the construction, care shall be taken to keep construction tools, stored materials or debris within the area bounded by the erosion control, i.e., upslope of the silt fencing, or on the side patio or driveway. No construction debris should be allowed into the channel, and any accidental discharge of such debris onto the creek bank or the channel bed shall be retrieved immediately. ▪ Accidental spills of chemical agents of any sort, including oils, greases, paint, or other materials used in construction shall be immediately segregated from the tributary channel and disposed of at an appropriately classified landfill for that material. Any soil contaminated by the spill shall also be removed and disposed of in the same manner. If any hazardous material is discharged into the tributary channel, the contractor shall immediately inform the City of Oakland's Watershed and Stormwater Management Division, OAK311 (report active infrastructure emergencies by dialing 311 or (510) 615-5566), or the City of Oakland's Department of Public Works. ▪ Heavy equipment operators shall maintain hazardous material clean-up kits on-site in order to rapidly respond to a potential hazardous material spill, leak, or other discharge. ▪ Following completion of construction, the upper bank and slope areas graded or otherwise disturbed during construction shall be seeded with native grasses. Other riparian plantings native to the East Bay hills could be added as desired. The graded/disturbed areas between any such supplemental plantings should be overlain with a light-duty mulch to stabilize the soil surface against raindrop impact and erosion. Pacific Coast Seed's Landmark "Habitat'' Mix, or a demonstrated native equivalent, which should be applied at a rate of 40 pounds per acre, shall be used. The Landmark Habitat Mix includes the following: ▪ *Bromus carinatus*/Native California brome ▪ *Elymus glaucus*/Blue wildrye ▪ *Hordeum califomicum*/California barley ▪ *Festuca idahoensis*/ldaho fescue ▪ *Nassella pulchra*/Purple needlegrass ▪ *Poa secunda*/Native pine bluegrass The base seed mix shall be 10 percent augmented with herbaceous perennials: yarrow (*Achillea millefolium*), bee plant (*Scrophularia californica*), and California aster (*Symphotrichum chilense*).	
Noise (NOI)		
NOI-8: The proposed project could result in the generation of excessive groundborne vibration in the vicinity of the project during the construction phase that would be in excess of established	**SCA-69. Exposure to Vibration:** The project applicant shall submit a Vibration Reduction Plan prepared by a qualified acoustical consultant for City review and approval that contains vibration reduction measures to reduce groundborne vibration to acceptable levels per Federal Transit Administration (FTA) standards. The applicant shall implement the approved Plan during construction. Potential vibration reduction measures include, but are not limited to, the following:	LTS/M

TABLE 2-1 SUMMARY OF SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVALS AND MITIGATION MEASURES

Impact Statement	Required Standard Conditions of Approval and Recommended Mitigation Measures	Resulting Level of Significance
thresholds.	a) Isolation of foundation and footings using resilient elements such as rubber bearing pads or springs, such as a "spring isolation" system that consists of resilient spring supports that can support the podium or residential foundations. The specific system shall be selected so that it can properly support the structural loads and provide adequate filtering of groundborne vibration to the residences above. b) Trenching, which involves excavating soil between the railway and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project's structures. Since the reduction in vibration level is based on a ratio between trench depth and vibration wavelength, additional measurements shall be conducted to determine the vibration wavelengths affecting the project. Based on the resulting measurement findings, an adequate trench depth and, if required, suitable fill shall be identified (such as foamed styrene packing pellets [i.e., Styrofoam] or low-density polyethylene). **SCA-70. Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities:** The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located adjacent to the project site. 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. **Mitigation Measure NOI-8:** If paving activity during construction is required within 25 feet of existing residential structures, use of a static roller in lieu of a vibratory roller shall be employed. Grading and earthwork activities within 15 feet of existing residential structures shall be conducted with off-road equipment that is limited to 100 horsepower or less, which would generate noise levels associated with a small bulldozer. This mitigation measure shall be identified on the permit application drawing set, as part of the construction drawing set, and included as part of the vibration studies conducted pursuant to Standard Conditions of Approval (SCA) 69, *Exposure to Vibration*, and SCA-70, *Vibration Impacts to Adjacent Historic Structures or Vibration-Sensitive Activities*, and shall be implemented by the on-site construction manager.	

Notes: No impact = NI; LTS = Less than Significant; LTS/M = Less than significant with Mitigation

TABLE 2-2 SUMMARY OF LESS THAN SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVAL

Impact Discussion	Required Standard Conditions of Approval
Aesthetics (AES)	
AES-3: The proposed project would not degrade the existing visual character or quality of the site and its surroundings.	**SCA-16. Trash and Blight Removal:** The project site must be free of blight as defined in Chapter 8.24 of the Oakland Municipal Code. **SCA-18. Landscape Plan:** A full landscape plan is required to be submitted to the City for the establishment of one or more new residential units, with proposed plants needing to be predominantly drought tolerant. **SCA-19. Lighting:** New exterior lighting fixtures included in proposed projects should be shielded to a point below the light bulb and reflector in order to prevent excessive glare onto adjacent properties.
AES-4: The proposed project would not create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area.	**SCA-19: Lighting.** New exterior lighting fixtures included in proposed projects should be shielded to a point below the light bulb and reflector in order to prevent excessive glare onto adjacent properties.
Air Quality (AIR)	
AIR-1: The proposed project construction would not result in average daily emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}.	**SCA-20. Dust Controls – Construction Related:** The project applicant shall implement all of the following applicable dust control measures during construction of the project: a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible. b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d) Limit vehicle speeds on unpaved roads to 15 miles per hour. e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph. f) All trucks and equipment, including tires, shall be washed off prior to leaving the site. g) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. h) Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). i) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. j) When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity. k) Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement

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	unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours. l) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. **SCA-21. Criteria Air Pollutant Controls - Construction Related:** The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable: a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points. b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations"). c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed. d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand. e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met. g) Criteria Air Pollutant Reduction Measures: The project applicant shall retain a qualified air quality consultant to identify criteria air pollutant reduction measures to reduce the project's average daily emissions below 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}. Quantified emissions and identified reduction measures shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits and the approved criteria air pollutant reduction measures shall be implemented during construction. h) Construction Emissions Minimization Plan: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified criteria air pollutant reduction measures. The Emissions Plan shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine

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	certification (tier rating), horsepower, and engine serial number. For all Verified Diesel Emissions Control Strategies (VDECS), the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date. ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.
AIR-4: The proposed project would not 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 non-cancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 micrograms per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.	**SCA-20. Dust Controls – Construction Related:** The project applicant shall implement all of the following applicable dust control measures during construction of the project: a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible. b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d) Limit vehicle speeds on unpaved roads to 15 miles per hour. e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph. f) All trucks and equipment, including tires, shall be washed off prior to leaving the site. g) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. h) Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). i) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. j) When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity. k) Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours. l) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. **SCA-21. Criteria Air Pollutant Controls - Construction Related:** The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable: a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California

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	airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points. b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations"). c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed. d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand. e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met. g) Criteria Air Pollutant Reduction Measures: The project applicant shall retain a qualified air quality consultant to identify criteria air pollutant reduction measures to reduce the project's average daily emissions below 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}. Quantified emissions and identified reduction measures shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits and the approved criteria air pollutant reduction measures shall be implemented during construction. h) Construction Emissions Minimization Plan: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified criteria air pollutant reduction measures. The Emissions Plan shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all Verified Diesel Emissions Control Strategies (VDECS), the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date. ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.

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AIR-5: The proposed project would not expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.	**SCA-20. Dust Controls – Construction Related:** The project applicant shall implement all of the following applicable dust control measures during construction of the project: a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible. b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d) Limit vehicle speeds on unpaved roads to 15 miles per hour. e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph. f) All trucks and equipment, including tires, shall be washed off prior to leaving the site. g) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. h) Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). i) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. j) When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity. k) Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours. l) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. **SCA-21. Criteria Air Pollutant Controls - Construction Related:** The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable: a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points. b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air

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	Resources Board Off-Road Diesel Regulations"). c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed. d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand. e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met. g) Criteria Air Pollutant Reduction Measures: The project applicant shall retain a qualified air quality consultant to identify criteria air pollutant reduction measures to reduce the project's average daily emissions below 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}. Quantified emissions and identified reduction measures shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits and the approved criteria air pollutant reduction measures shall be implemented during construction. h) Construction Emissions Minimization Plan: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified criteria air pollutant reduction measures. The Emissions Plan shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all Verified Diesel Emissions Control Strategies (VDECS), the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date. ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.
Biological Resources (BIO)	
BIO-1: The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on nesting raptors and other native birds.	**SCA-29. Tree Removal During Bird Breeding Season:** To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest

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	in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.
BIO-3: The proposed project would not 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.	**SCA-50. State Construction General Permit:** The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City. **SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects:** a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.

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	SCA-57. Vegetation Management on Creekside Properties: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project: a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat; b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact; c) Leave stumps and roots from cut down trees to prevent erosion; d) Plant fire-appropriate, drought-tolerant, preferably native vegetation; e) Provide erosion and sediment control protection if cutting vegetation on a steep slope; f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management; g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine); h) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat; i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development; j) Do not trim/prune branches that are larger than 4 inches in diameter; k) Do not remove tree canopy; l) Do not dump cut vegetation in the creek; m) Do not cut tall shrubbery to less than 3 feet high; and n) Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high. **SCA-58. Creek Protection Plan:** a) Creek Protection Plan Required: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d). b) Construction Best Management Practices: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control best management practices to protect the creek during construction. The measures shall include, but are not limited to, the following: i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek. ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by

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	seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted. v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains. vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek. viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site. ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work. xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains. xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB). xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City. c) Post-Construction Best Management Practices: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy

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	dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. d) Creek Landscaping: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival. e) Creek Protection Plan Implementation: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.
BIO-4: The proposed project would not 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.	**SCA-28. Bird Collision Reduction Measures:** The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following: a) For large buildings subject to federal aviation safety regulations, install minimum intensity white strobe lighting with three second flash instead of solid red or rotating lights. b) Minimize the number of and co-locate rooftop-antennas and other rooftop structures. c) Monopole structures or antennas shall not include guy wires. d) Avoid the use of mirrors in landscape design. e) Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule), as explained below. f) Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following: i. Use opaque glass in window panes instead of reflective glass. ii. Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule). iii. Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule). iv. Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.

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	v. Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans. vi. Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule). vii. Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides. viii. Install opaque window film or window film with a pattern/design which also adheres to the "two-by-four" rule for coverage. g) Reduce light pollution. Examples include the following: i. Extinguish night-time architectural illumination treatments during bird migration season (February 15 to May 15 and August 15 to November 30). ii. Install time switch control devices or occupancy sensors on non-emergency interior lights that can be programmed to turn off during non-work hours and between 11:00 p.m. and sunrise. iii. Reduce perimeter lighting whenever possible. iv. Install full cut-off, shielded, or directional lighting to minimize light spillage, glare, or light trespass. v. Do not use beams of lights during the spring (February 15 to May 15) or fall (August 15 to November 30) migration. h) Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following: i. Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws. ii. Distribution of educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials. iii. Asking employees to turn off task lighting at their work stations and draw office blinds, shades, curtains, or other window coverings at end of work day. iv. Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs. v. Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible. **SCA-29. Tree Removal During Bird Breeding Season:** To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be

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	determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest. SCA-31. Alameda Whipsnake Protection Measures: a) Pre-Construction Survey Required. The project applicant shall hire a qualified biologist to conduct an Alameda whipsnake survey to identify the potential presence of Alameda whipsnakes at the project site. If the presence of Alameda whipsnakes is confirmed, the whipsnakes shall be captured and relocated away from the construction area by a qualified biologist in accordance with all applicable regulations and guidelines. The biologist shall submit the results of the survey (and capture/relocation if applicable) to the City for review and approval. b) Information and Protocols for Construction Workers. The biologist from section (a) above shall instruct the project superintendent and the construction crews (primarily the clearing, demolition, and foundation crews) of the potential presence, status, and identification of Alameda whipsnakes. The biologist shall also establish a set of protocols for use during construction concerning the steps to take if a whipsnake is seen on the project site, including who to contact, to ensure that whipsnakes are not harmed or killed. The project applicant shall submit evidence of compliance with these requirements to the City for review and approval. c) Alameda Whipsnake Exclusion Fence. Unless alternative (equivalent or more effective) measures are recommended by the biologist, the project applicant shall install a solid fence to prevent whipsnakes from entering the work site. The snake exclusion fence shall be constructed as follows: i. Plywood sheets at least three feet in height, above ground. Heavy duty geotextile fabric approved by the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife may also be used for the snake exclusion fence; ii. Buried four to six inches into the ground; iii. Soil back-filled against the plywood fence to create a solid barrier at the ground; iv. Plywood sheets maintained in an upright position with wooden or masonry stakes; v. Ends of each plywood sheet overlapped to ensure a continuous barrier; and vi. Work site or construction area shall be completely enclosed by the exclusion fence or approved traps shall be installed at the ends of exclusion fence segments to allow capture and relocation of Alameda whipsnake away from the construction area by a qualified biologist. The location and design of the proposed exclusion fence shall be submitted for review and approval by the City and be included on plans for all construction-related permits. d) Alameda Whipsnake Protection During Construction. The project applicant shall comply with the requirements in the above sections during construction activities. The approved protocol from section (b) above shall be followed in the event Alameda whipsnakes are encountered. The snake exclusion fence from section (c) above shall be installed and remain in place throughout the construction period. All construction activities and equipment/materials/debris storage shall take place on the project-side of the exclusion fence.

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Impact Discussion	Required Standard Conditions of Approval
BIO-6: The proposed project would not fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances.	**SCA-30. Tree Permit:** a) Tree Permit Required: Pursuant to the City's Tree Protection Ordinance (OMC Chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit. b) Tree Protection During Construction. Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist: i. Before the start of any clearing, excavation, construction, or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree. ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree. iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree. iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration. v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed. vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations. c) Tree Replacement Plantings: Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria:

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Impact Discussion	Required Standard Conditions of Approval
	i. No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered. ii. Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or other tree species acceptable to the Tree Division. iii. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate. iv. Minimum planting areas must be available on site as follows: v. For Sequoia sempervirens, three hundred fifteen (315) square feet per tree; vi. For other species listed, seven hundred (700) square feet per tree. vii. In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians. viii. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense.
Cultural and Tribal Cultural Resources (CUL)	
CUL-2: The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.	**SCA-32. Archaeological and Paleontological Resources – Discovery During Construction:** 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

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Impact Discussion	Required Standard Conditions of Approval
	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.
CUL-3: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**SCA-32. Archaeological and Paleontological Resources – Discovery During Construction:** 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.

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Impact Discussion	Required Standard Conditions of Approval
CUL-4: The proposed project would not disturb any human remains, including those interred outside of formal cemeteries.	**SCA-34. Human Remains – Discovery During Construction:** 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.
CUL-5: Implementation of the proposed project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: (i) Listed or eligible for listing in the California; (ii) Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or (iii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.	**SCA-32. Archaeological and Paleontological Resources – Discovery During Construction:** 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.

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	SCA-34. Human Remains – Discovery During Construction: 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.
Energy (ENE)	
ENE-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	**SCA-41. Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist:** 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. 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.
ENE-3: The proposed project would not 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.	**SCA-85. Green Building Requirements:** a) Compliance with Green Building Requirements During Plan-Check: The project shall comply with the requirements of the Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code). i. The following information shall be submitted to the City for review and approval with the application for a building permit: ▪ Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. ▪ Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. ▪ Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. ▪ Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below.

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	▪ Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. ▪ Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. ▪ Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ii. The set of plans in subsection (i) shall demonstrate compliance with the following: ▪ CALGreen mandatory measures. ▪ Minimum of 23 points (3 Community, 6 IAQ/Health, 6 Resources, 8 Water). ▪ All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. ▪ The required green building point minimums in the appropriate credit categories. b) Compliance with Green Building Requirements During Construction: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. The following information shall be submitted to the City for review and approval: i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit. ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance. iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. c) Compliance with Green Building Requirements After Construction: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.
Geology and Soils (GEO)	
GEO-1: The proposed project would not expose people or structures to substantial risk of loss, injury, or death involving: (a) 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; (b) Strong seismic ground shaking; (c) Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, or collapse; or (d) Landslides.	**SCA-36. Construction-Related Permit(s):** 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. **SCA-37. Soils Report:** 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.

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	SCA-39. Seismic Hazards Zone (Landslide/Liquefaction): The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.
GEO-2: The proposed project would not result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.	**SCA-50. State Construction General Permit:** The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City. **SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects:** a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary.

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	The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense. **SCA-57. Vegetation Management on Creekside Properties:** The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project: a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat; b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact; c) Leave stumps and roots from cut down trees to prevent erosion; d) Plant fire-appropriate, drought-tolerant, preferably native vegetation; e) Provide erosion and sediment control protection if cutting vegetation on a steep slope; f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management; g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine); h) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat; i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development; j) Do not trim/prune branches that are larger than 4 inches in diameter; k) Do not remove tree canopy; l) Do not dump cut vegetation in the creek; m) Do not cut tall shrubbery to less than 3 feet high; and n) Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high. **SCA-58. Creek Protection Plan:** a) Creek Protection Plan Required: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d). b) Construction Best Management Practices: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control best management practices to protect the creek during construction. The measures shall include, but are not limited to, the following: i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek. ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and

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	before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted. v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains. vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek. viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site. ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work. xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains. xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB). xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City. c) Post-Construction Best Management Practices: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures

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	to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. d) Creek Landscaping: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival. e) Creek Protection Plan Implementation: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.
GEO-3: The proposed project would not 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.	**SCA-36. Construction-Related Permit(s):** 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. **SCA-37. Soils Report:** 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. **SCA-39. Seismic Hazards Zone (Landslide/Liquefaction):** The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.
Greenhouse Gas Emissions (GHG)	
GHG-2: The proposed project would be consistent with the Oakland 2030 Equitable Climate Action Plan and would not conflict with other applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	**SCA-41. Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist:** 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.

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	b) For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be implemented during construction. 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 (HAZ)	
HAZ-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	**SCA-43. Hazardous Materials Related to Construction:** The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a) Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b) Avoid overtopping construction equipment fuel gas tanks; c) During routine maintenance of construction equipment, properly contain and remove grease and oils; d) Properly dispose of discarded containers of fuels and other chemicals; e) Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f) If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.
HAZ-2: The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	**SCA-43. Hazardous Materials Related to Construction:** The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a) Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b) Avoid overtopping construction equipment fuel gas tanks; c) During routine maintenance of construction equipment, properly contain and remove grease and oils; d) Properly dispose of discarded containers of fuels and other chemicals; e) Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f) If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work

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	in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.
HAZ-3: The proposed project would not create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors.	SCA-43. Hazardous Materials Related to Construction: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a) Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b) Avoid overtopping construction equipment fuel gas tanks; c) During routine maintenance of construction equipment, properly contain and remove grease and oils; d) Properly dispose of discarded containers of fuels and other chemicals; e) Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f) If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.
HAZ-4: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	SCA-43. Hazardous Materials Related to Construction: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a) Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b) Avoid overtopping construction equipment fuel gas tanks; c) During routine maintenance of construction equipment, properly contain and remove grease and oils; d) Properly dispose of discarded containers of fuels and other chemicals; e) Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f) If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all

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	appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.
Hydrology and Water Quality (HYD)	
HYD-1: The proposed project would not violate any water quality standards or waste discharge requirements.	**SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects:** a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense. **SCA-57. Vegetation Management on Creekside Properties:** The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project: a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat; b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact;

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	c) Leave stumps and roots from cut down trees to prevent erosion; d) Plant fire-appropriate, drought-tolerant, preferably native vegetation; e) Provide erosion and sediment control protection if cutting vegetation on a steep slope; f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management; g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine); h) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat; i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development; j) Do not trim/prune branches that are larger than 4 inches in diameter; k) Do not remove tree canopy; l) Do not dump cut vegetation in the creek; m) Do not cut tall shrubbery to less than 3 feet high; and n) Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high.
HYD-3: The proposed project would not result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters.	**SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects:** a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and

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ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary.

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

SCA-57. Vegetation Management on Creekside Properties: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project:

a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat;
b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact;
c) Leave stumps and roots from cut down trees to prevent erosion;
d) Plant fire-appropriate, drought-tolerant, preferably native vegetation;
e) Provide erosion and sediment control protection if cutting vegetation on a steep slope;
f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management;
g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine);
h) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat;
i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development;
j) Do not trim/prune branches that are larger than 4 inches in diameter;
k) Do not remove tree canopy;
l) Do not dump cut vegetation in the creek;
m) Do not cut tall shrubbery to less than 3 feet high; and
n) Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high.

SCA-58. Creek Protection Plan:

a) Creek Protection Plan Required: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d).
b) Construction Best Management Practices: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control best management practices to protect the creek during construction. The measures shall include, but are not limited to, the following:
   i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a

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	constant elevation) to prevent erosion into the creek. ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted. v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains. vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek. viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site. ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work. xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains. xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB). xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the

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	maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City. c) Post-Construction Best Management Practices: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. d) Creek Landscaping: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival. e) Creek Protection Plan Implementation: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.
HYD-4: The proposed project would not result in substantial flooding on- or off-site.	**SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects:** a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following:

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	i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense. SCA-88. Storm Drain System: 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.
HYD-5: The proposed project would not create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems and would not require or result in construction of new stormwater drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects.	SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects: a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary.

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	The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense. **SCA-73. Capital Improvements Impact Fee**: 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). **SCA-88. Storm Drain System**: 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.
HYD-6: The proposed project would not create or contribute substantial runoff which would be an additional source of polluted runoff.	**SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects:** a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense. **SCA-88. Storm Drain System**: 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.

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Impact Discussion	Required Standard Conditions of Approval
HYD-7: The proposed project would not otherwise substantially degrade water quality.	SCA-43. Hazardous Materials Related to Construction: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a) Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b) Avoid overtopping construction equipment fuel gas tanks; c) During routine maintenance of construction equipment, properly contain and remove grease and oils; d) Properly dispose of discarded containers of fuels and other chemicals; e) Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f) If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate. SCA-50. State Construction General Permit: The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City. SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects: a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.

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	b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense. SCA-57. Vegetation Management on Creekside Properties: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project: a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat; b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact; c) Leave stumps and roots from cut down trees to prevent erosion; d) Plant fire-appropriate, drought-tolerant, preferably native vegetation; e) Provide erosion and sediment control protection if cutting vegetation on a steep slope; f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management; g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine); h) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat; i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development; j) Do not trim/prune branches that are larger than 4 inches in diameter; k) Do not remove tree canopy; l) Do not dump cut vegetation in the creek; m) Do not cut tall shrubbery to less than 3 feet high; and n) Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high. SCA-88. Storm Drain System: 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.

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HYD-11: The proposed project would not expose people or structures to a substantial risk of loss, injury, or death as a result of inundation by seiche, tsunami, or mudflow.	SCA-39. Seismic Hazards Zone (Landslide/Liquefaction): The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.
HYD-12: The proposed project would not 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.	SCA-58. Creek Protection Plan: a) Creek Protection Plan Required: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d). b) Construction Best Management Practices: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control best management practices to protect the creek during construction. The measures shall include, but are not limited to, the following: i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek. ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted. v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains. vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.

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	viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site. ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work. xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains. xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB). xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City. c) Post-Construction Best Management Practices: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. d) Creek Landscaping: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival. e) Creek Protection Plan Implementation: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.

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HYD-13: The proposed project would not fundamentally conflict with the City of Oakland Creek Protection Ordinance (Oakland Municipal Code Chapter 13.16) intended to protect hydrologic resources.	**SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects:** a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense. **SCA-57. Vegetation Management on Creekside Properties:** The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project: a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat; b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact; c) Leave stumps and roots from cut down trees to prevent erosion; d) Plant fire-appropriate, drought-tolerant, preferably native vegetation; e) Provide erosion and sediment control protection if cutting vegetation on a steep slope; f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management; g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine);

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	h) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat; i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development; j) Do not trim/prune branches that are larger than 4 inches in diameter; k) Do not remove tree canopy; l) Do not dump cut vegetation in the creek; m) Do not cut tall shrubbery to less than 3 feet high; and n) Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high. SCA-58. Creek Protection Plan: a) Creek Protection Plan Required: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d). b) Construction Best Management Practices: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control best management practices to protect the creek during construction. The measures shall include, but are not limited to, the following: i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek. ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted. v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness

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	and prevent street flooding. vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains. vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek. viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site. ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work. xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains. xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB). xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City. c) Post-Construction Best Management Practices: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. d) Creek Landscaping: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival. e) Creek Protection Plan Implementation: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant

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	(paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.
Noise (NOI)	
NOI-1: The proposed project would not generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise.	**SCA-62. Construction Days/Hours:** The project applicant shall comply with the following restrictions concerning construction days and hours: a) Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b) Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. c) No construction is allowed on Sunday or federal holidays. Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice. **SCA-63. Construction Noise:** The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following: a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible. b) Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

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	c) Applicant shall use temporary power poles instead of generators where feasible. d) Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. e) The noisiest phases of construction shall be limited to less than ten days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented. SCA-64. Extreme Construction Noise: a) Construction Noise Management Plan Required. Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following: i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and v. Monitor the effectiveness of noise attenuation measures by taking noise measurements. b) Public Notification Required. 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. SCA-65. Project-Specific Construction Noise Reduction Measures: The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts on the nearest noise sensitive receptors. The project applicant shall implement the approved Plan during construction. SCA-66. Construction Noise Complaints: 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

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	the procedures during construction. At a minimum, the procedures shall include: a) Designation of an on-site construction complaint and enforcement manager for the project; b) A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; c) Protocols for receiving, responding to, and tracking received complaints; and d) Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.
NOI-2: The proposed project would not generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise.	**SCA-62. Construction Days/Hours:** The project applicant shall comply with the following restrictions concerning construction days and hours: a) Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b) Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. c) No construction is allowed on Sunday or federal holidays. Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice. **SCA-63. Construction Noise:** The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following: a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible. b) Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this

TABLE 2-2 SUMMARY OF LESS THAN SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVAL

Impact Discussion	Required Standard Conditions of Approval
	could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. c) Applicant shall use temporary power poles instead of generators where feasible. d) Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. e) The noisiest phases of construction shall be limited to less than ten days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.
NOI-3: The proposed project would not generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise.	**SCA-68. Operational Noise:** Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of section 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.
NOI-5: The proposed project would not 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).	**SCA-67. Exposure to Community Noise:** The project applicant shall submit a Noise Reduction Plan by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated windows, 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
NOI-6: The proposed project would not 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.	**SCA-67. Exposure to Community Noise:** The project applicant shall submit a Noise Reduction Plan by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated windows, 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
NOI-8: The proposed project could expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration during either project construction or project operation.	**SCA-69. Exposure to Vibration:** The project applicant shall submit a Vibration Reduction Plan prepared by a qualified acoustical consultant for City review and approval that contains vibration reduction measures to reduce groundborne vibration to acceptable levels per Federal Transit Administration (FTA) standards. The applicant shall implement the approved Plan during construction. Potential vibration reduction measures include, but are not limited to, the following: a) Isolation of foundation and footings using resilient elements such as rubber bearing pads or springs, such as a "spring isolation" system that consists of resilient spring supports that can support the podium or residential

TABLE 2-2 SUMMARY OF LESS THAN SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVAL

Impact Discussion	Required Standard Conditions of Approval
	foundations. The specific system shall be selected so that it can properly support the structural loads and provide adequate filtering of groundborne vibration to the residences above. b) Trenching, which involves excavating soil between the railway and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project's structures. Since the reduction in vibration level is based on a ratio between trench depth and vibration wavelength, additional measurements shall be conducted to determine the vibration wavelengths affecting the project. Based on the resulting measurement findings, an adequate trench depth and, if required, suitable fill shall be identified (such as foamed styrene packing pellets [i.e., Styrofoam] or low-density polyethylene). **SCA-70. Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities:** The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located adjacent to the project site. 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.
Public Services (PS)	
PS-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.	**SCA-73. Capital Improvements Impact Fee**: 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).
PS-3: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police services.	**SCA-73. Capital Improvements Impact Fee**: 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).
PS-7: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to	**SCA-73. Capital Improvements Impact Fee**: 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).

TABLE 2-2 SUMMARY OF LESS THAN SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVAL

Impact Discussion	Required Standard Conditions of Approval
maintain acceptable service ratios, response times, or other performance objectives for libraries.	
Recreation (REC)	
REC-1: The proposed project would not 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.	**SCA-73. Capital Improvements Impact Fee**: 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). **SCA-74. Access to Parks and Open Space:** The project applicant shall submit a plan for City review and approval to enhance bicycle and pedestrian access from the project site and adjacent areas to Leona Canyon Regional Open Space Preserve. Examples of enhancements may include, but are not limited to, new or improved bikeways, bike parking, traffic control devices, sidewalks, pathways, bulb-outs, and signage. The project sponsor shall install the approved enhancements during construction and prior to completion of the project.
Transportation (TRANS)	
TRANS-1: The proposed project would not conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, and bicycle and pedestrian facilities (except for automobile level of service or other measures of vehicle delay).	**SCA-79. Transportation Impact Fee:** 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).
Utilities and Service Systems (UTIL)	
UTIL-2: The proposed project would not 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.	**SCA-87. Sanitary Sewer System:** 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.
UTIL-4: The proposed project would not exceed water supplies available to serve the project from existing entitlements and resources and would not require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects.	**SCA-86. Green Building Requirements – Small Projects:** a) Compliance with Green Building Requirements During Plan Check: 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) for projects using the Bay Friendly Basic Landscape Checklist. i. The following information shall be submitted to the City for review and approval with application for a building permit: ▪ Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards.

TABLE 2-2 SUMMARY OF LESS THAN SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVAL

Impact Discussion	Required Standard Conditions of Approval

- Completed copy of the green building checklist approved during the review of a 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 (b) below.
- Other documentation to prove compliance.

ii. The set of plans in subsection (a) shall demonstrate compliance with the following:

- CALGreen mandatory measures.
- All applicable green building measures identified on the checklist approved during the review of a Planning and Zoning permit, or submittal of a Request for Revision Plan-check application that shows the previously approved points that will be eliminated or substituted.

b) Compliance with Green Building Requirements During Construction: The project applicant shall comply with the applicable requirements of CALGreen and the Green Building Ordinance during construction. The following information shall be submitted to the City for review:

i. Completed copy of the green building checklists approved during review of the Planning and Zoning permit and during the review of the Building permit.
ii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

SCA-90. Water Efficient Landscape Ordinance (WELO): The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage.

For any landscape project with an aggregate (total noncontiguous) landscape area equal to 2,500 sq. ft. or less, the project applicant may implement either the Prescriptive Measures or the Performance Measures, of, and in accordance with the California's Model Water Efficient Landscape Ordinance.

Prescriptive Measures: Prior to construction, the project applicant shall submit documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance.

Performance Measures: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes the following:

a) Project Information:

i. Date,
ii. Applicant and property owner name,
iii. Project address,
iv. Total landscape area,
v. Project type (new, rehabilitated, cemetery, or homeowner installed),
vi. Water supply type and water purveyor,
vii. Checklist of documents in the package, and
viii. Applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package."

TABLE 2-2 SUMMARY OF LESS THAN SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVAL

Impact Discussion	Required Standard Conditions of Approval
	b) Water Efficient Landscape Worksheet i. Hydrozone Information Table ii. Water Budget Calculations with Maximum Applied Water Allowance and Estimated Total Water Use c) Soil Management Report d) Landscape Design Plan e) Irrigation Design Plan f) Grading Plan Upon installation of the landscaping and irrigation systems, the Project applicant shall submit a Certificate of Completion and landscape and irrigation maintenance schedule for review and approval by the City. The Certificate of Compliance shall also be submitted to the local water purveyor and property owner or his or her designee.
UTIL-6: The landfill serving the proposed project would have sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs and would not require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects.	**SCA-82. Construction and Demolition Waste Reduction and Recycling.** The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (Chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.
Wildfire (WF)	
WF-1: The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	**SCA-47. Designated Very High Fire Severity Zone – Vegetation Management:** a) Vegetation Management Plan Required: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures: i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically; ii. Removal of leaves and needles from roofs and rain gutters; iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure; iv. Trimming back vegetation around windows; v. Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on slopes of 5 to 20% and within 100 feet or to the property line on slopes greater than 20%.

TABLE 2-2 SUMMARY OF LESS THAN SIGNIFICANT IMPACTS WITH STANDARD CONDITIONS OF APPROVAL

Impact Discussion	Required Standard Conditions of Approval
	vi. All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk; vii. Clearing out ground-level brush and debris; and All non-ornamental plants, seasonal weeds & grasses, brush, leaf litter and debris within 30 feet of the residential structure shall be cut, raked and removed from the parcel. viii. Stacking woodpiles away from structures at least 20 feet from residential structures. ix. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species. b) Fire Safety Prior to Construction: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6" or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code. c) Fire Safety During Construction: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per Section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition. d) Smoking Prohibition: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code.
WF-3: The proposed project would be in a Very High Fire Hazard Severity Zone, but due to slope, prevailing winds, and other project-specific amenities would not exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	**SCA-47. Designated Very High Fire Severity Zone – Vegetation Management:** a) Vegetation Management Plan Required: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures: i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically; ii. Removal of leaves and needles from roofs and rain gutters; iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure; iv. Trimming back vegetation around windows; v. Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on slopes of 5 to 20% and within 100 feet or to the property line on slopes greater than 20%. vi. All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk;

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	vii. Clearing out ground-level brush and debris; and All non-ornamental plants, seasonal weeds & grasses, brush, leaf litter and debris within 30 feet of the residential structure shall be cut, raked and removed from the parcel. viii. Stacking woodpiles away from structures at least 20 feet from residential structures. ix. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species. b) Fire Safety Prior to Construction: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6" or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code. c) Fire Safety During Construction: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per Section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition. d) Smoking Prohibition: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code.
WF-4: The proposed project would be located in the Very High Fire Hazard Severity Zone, but would not require the installation or maintenance of a significant amount of associated infrastructure (such as lengthy roads, fuel breaks, emergency water sources, above-ground power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	**SCA-47. Designated Very High Fire Severity Zone – Vegetation Management:** a) Vegetation Management Plan Required: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures: i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically; ii. Removal of leaves and needles from roofs and rain gutters; iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure; iv. Trimming back vegetation around windows; v. Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on slopes of 5 to 20% and within 100 feet or to the property line on slopes greater than 20%. vi. All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk;

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	vii. Clearing out ground-level brush and debris; and All non-ornamental plants, seasonal weeds & grasses, brush, leaf litter and debris within 30 feet of the residential structure shall be cut, raked and removed from the parcel. viii. Stacking woodpiles away from structures at least 20 feet from residential structures. ix. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species. b) Fire Safety Prior to Construction: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6" or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code. c) Fire Safety During Construction: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per Section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition. d) Smoking Prohibition: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code.
WF-5: The proposed project would be in a Very High Fire Hazard Severity Zone, but it would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	**SCA-39. Seismic Hazards Zone (Landslide/Liquefaction):** The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.

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3. *Project Description*

3.1 INTRODUCTION AND OVERVIEW

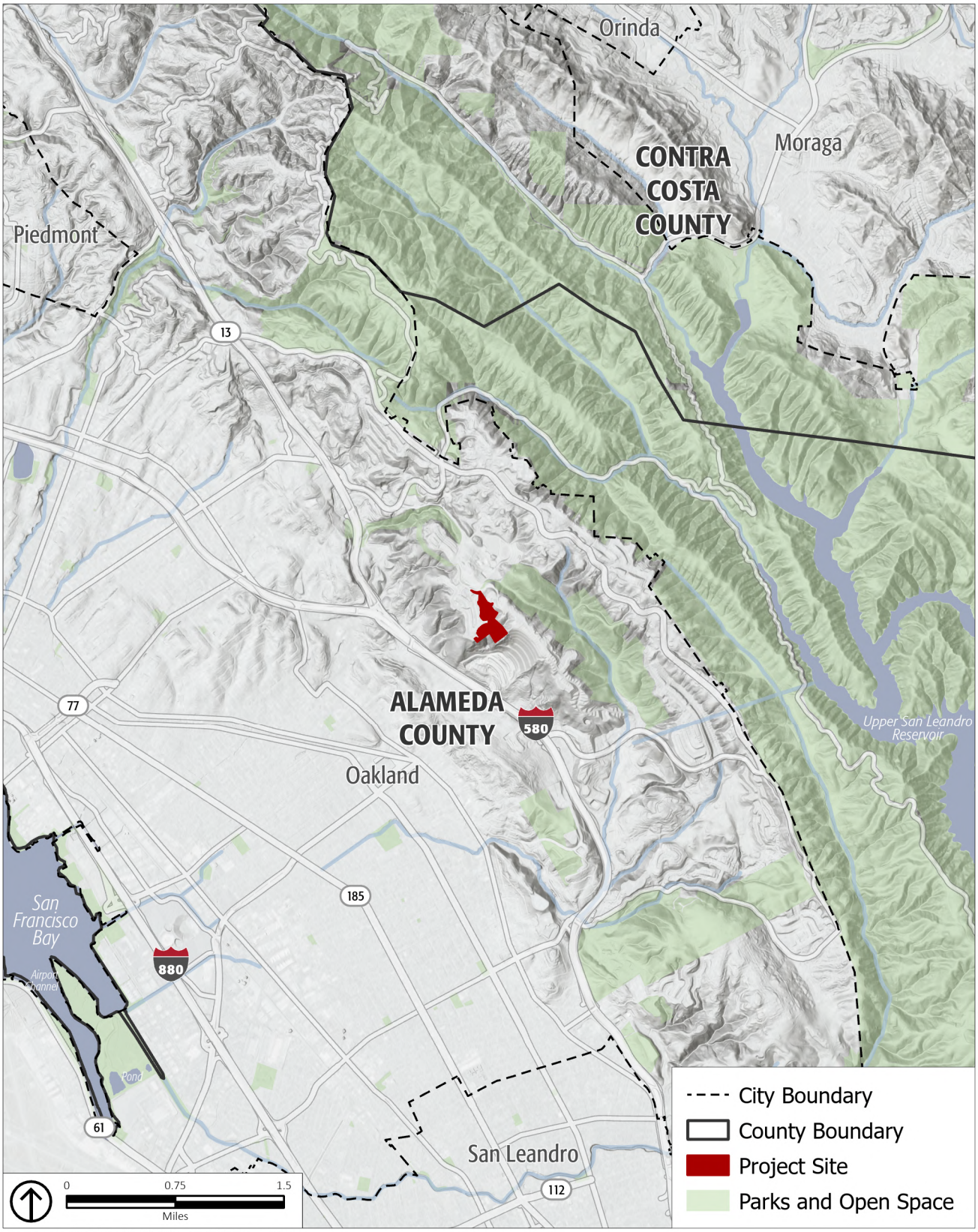
The project applicant, Dr. Collin Mbanugo, is proposing the Viewcrest Estates Project, herein referred to as the proposed project. The project as originally proposed included the construction and occupancy of 20 single-family attached townhomes on a new residential street (Viewcrest Lane). The proposed development would occur on an undeveloped parcel accessible from Campus Drive in Oakland, California. The applicant voluntarily modified the original project to reduce impacts based on the preliminary analysis of vehicle miles traveled, air quality, and other potential impacts conducted as part of the environmental review process.

As currently designed, the proposed project would involve the construction and occupancy of 10 single-family detached homes in the same area on the same parcel of land. This chapter provides a detailed description of the proposed project, including the location, setting, and characteristics of the project site; the proposed project's objectives; the principal project features; project phasing; approximate construction schedule; and required permits and approvals. Additional descriptions of the environmental setting as they relate to each of the environmental issues analyzed in Chapter 4, *Environmental Analysis*, of this Draft Environmental Impact Report (EIR), are included in the environmental setting discussions in Chapters 4.1 through 4.17.

3.2 SETTING

3.2.1 REGIONAL LOCATION

Figure 3-1, *Regional Vicinity Map*, shows the regional location of the proposed project. The project site is in the eastern hills of Oakland (Oakland Hills) in Alameda County, which is in the East Bay region of the San Francisco Bay Area. Interstate 580 runs northwest to southeast 0.5 miles southwest of the project site. Alameda County Transit provides public transportation to the project area via Campus Drive and the Merritt College bus stop (Line 54) 0.3 miles north of the project site on Margie Lane on the Merritt Community College campus. The nearest Bay Area Rapid Transit (BART) station is the Fruitvale Station, 3.3 miles southwest of the project site on East 12th Street. Downtown Oakland is 4.8 miles west of the project site, and the Oakland International Airport is 5 miles southwest of the project site.



Source: ESRI, 2022; PlaceWorks, 2022.

Figure 3-1
Regional Vicinity Map

3.2.2 LOCAL SETTING

The approximately 20-acre project site is assigned Assessor's Parcel Number 37A-3151-2-5. The project site is in the Caballo Hills neighborhood, a single-family residential area on the eastern hillsides of Oakland in Alameda County. The project site is surrounded by Merritt Community College to the north across Campus Drive, single-family homes to the east along Campus Drive, condominiums of the Monte Vista Villas Homeowners Association to the south, and single-family homes on Viewcrest Drive to the west. The project site is bounded by Campus Drive to the north and single-family residential development to the east, south, and west. The 290-acre Leona Canyon Regional Open Space Preserve is 0.2 miles to the east of the project site, and Leona Heights Park is 0.4 miles to the northwest.

3.2.3 EXISTING SITE CONDITIONS

The project site is an undeveloped north-south-trending strip of land with existing residential land uses to the east and west. The project site is steeply sloped, with elevations ranging from approximately 680 feet above sea level on the southern portion of the site to approximately 1,000 feet above sea level on the northern portion of the site. Site topography generally slopes down to the southwest toward the San Francisco Bay.

Hazardous materials generally include toxic chemicals that are harmful to humans and the environment. The project site is not on a list of hazardous materials sites pursuant to Government Code Section 65962.5.[1, 2]

The project area has a "very low" liquefaction hazard and a potential landslide hazard on the site.[3, 4] The surficial geology is described as tertiary, volcanic rocks and is mapped as Coast Range Ophiolite, a highly metamorphosed rock that does not contain intact sedimentary rocks, which can contain fossils.[5] The mineral resource Leona rhyolite, a volcanic rock used for roads and foundations, has been observed in the project area, but is not within the area of proposed development on the site. According to the California Department of Conservation, Geological Survey, the project site is in a Mineral Resource Zone 2.

Historic-period mining prospects have been identified on the project site; however, the prospects do not qualify as a historical or unique archaeological resource under the California Environmental Quality Act

[1] State Department of Toxic Substance Control, 2022, Envirostor, https://www.envirostor.dtsc.ca.gov/public/map/, accessed October 6, 2022.

[2] Water Resources Control Board, 2022, Geotracker, https://geotracker.waterboards.ca.gov/, accessed October 6, 2022.

[3] Metropolitan Transportation Commission and Association of Bay Area Governments, updated August 2021, MTC/ABAG Hazard Viewer Map, https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8, accessed October 6, 2022.

[4] City of Oakland, November 2004, *City of Oakland General Plan, Safety Element*, Figure 3.1, *Geologic hazards*.

[5] California Department of Conservation, updated April 2022, Geologic Map of California, https://cadoc.maps.arcgis.com/home/item.html?id=9eba56d981df4f839769ce9a2adc01f4, accessed October 6, 2022.

(CEQA). The project site does not have any other known cultural or tribal cultural resources that are known to the City of Oakland (City).[6]

On-site vegetation consists of a mosaic of oak woodlands, coyote brush scrubland, and grasslands, with dense stands of chaparral covering the southern portion of the site where no development is proposed. Ornamental landscape trees have been planted along the Campus Drive frontage, and invasive French broom (*Genista monspessulana*) has spread through much of the grassland and scrub cover on the site. The project site contains and is adjacent to habitat for special-status plant or animal species.[7] A small ephemeral (seasonal) creek runs east to west downslope at the southern edge of the 2.6-acre proposed development area on the project site.

The project site does not include lands designated by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and is instead classified as Urban and Built-Up Land and Other Land.[8] The project site is not subject to California Land Conservation Act (Williamson Act) contracts.[9] The site does not contain any woodland or forestland cover and is not designated for timberland production.[10]

The California Department of Forestry and Fire Protection has designated the project site a Local Responsibility Area and a very high fire hazard severity zone. The nearest State Responsibility Area is approximately one mile to the east of the project site.[11] The project site is within the wildland-urban interface, an area of transition between wildland (unoccupied land) and human development.[12] Additionally, the project site is in the Oakland Wildfire Prevention District.

3.2.4 LAND USE AND ZONING

3.2.4.1 GENERAL PLAN

The Oakland General Plan, adopted in 1998, describes the long-term plans for growth and development for the City. The General Plan contains specific elements and policies for land use and transportation; housing; noise; open space, conservation, and recreation; safety; scenic highways; historic preservation;

[6] Tom Origer & Associates, September 28, 2022, *Cultural Resources Study for the Viewcrest Estates Project, Oakland, Alameda County, California*.

[7] Special-status species are plants and animals that are legally protected under the Endangered Species Act/California Endangered Species Act or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat.

[8] California Department of Conservation, 2018, *California Important Farmland Finder*, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed October 6, 2022.

[9] The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use.

[10] California Department of Forestry and Fire Protection, December 2019, Landcover, https://frap.fire.ca.gov/media/10311/fveg_19_ada.pdf, accessed October 6, 2022.

[11] California Department of Forestry and Fire Protection, FHSZ Viewer, https://egis.fire.ca.gov/FHSZ/, accessed October 6, 2022.

[12] California Department of Forestry and Fire Protection, updated August 2020, Wildland-Urban Interface Fire Threat, http://www.arcgis.com/home/item.html?id=d45bf08448354073a26675776f2d09cb, accessed October 6, 2022.

and estuary policy. The Oakland General Plan Designations map, dated May 19, 2015, indicates the project site is designated as Resource Conservation.[13] The intent of the Resource Conservation designation is to conserve and manage undeveloped areas in Oakland that have high natural resource and/or scenic value or have natural hazards that preclude safe development.[14] Development within the Resource Conservation designation is limited to what is related to conservation and management of natural resources, public open space, and natural hazards; buildings are not permitted except as required for maintenance of these areas.[15]

3.2.4.2 ZONING

According to the City's Zoning Map, dated December 11, 2018, the project site is zoned as Hillside Residential (RH-1). The intent of the RH-1 zone is to create and maintain residential areas that are on hillside lots. There are four types of Residential Hillside zones in the Oakland Planning Code. The RH-1 designation means Hillside Residential – 1 Zone. This zone allows for single-family dwellings on lots of one acre or more and permits up to one family dwelling with a secondary unit.[16]

3.2.4.3 OTHER REQUIREMENTS

The City of Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts from development in Oakland. Such directives are related to setbacks for adequate light, air, and clear lines of sight at intersections; water quality; the protection of designated trees; energy conservation; the provisions of adequate infrastructure; and the reduction of solid waste. Descriptions of these directives are in the environmental setting discussions and impact discussions in Chapters 4.1 through 4.17 of this Draft EIR.

3.3 PROJECT OBJECTIVES

The primary purpose of the proposed project is to provide a high-quality housing project in Oakland with limited disturbance to the land and surrounding community, therefore resulting in the fewest environmental impacts. Accordingly, as described in Section 3.1, *Introduction and Overview*, the original project was modified from 20 to ten units to reduce impacts based on the preliminary analysis conducted as part of the environmental review process. Pursuant to CEQA Guidelines Section 15124, *Project Description*, the following project objectives support the proposed project's purpose; assist the City, as the lead agency, in developing a reasonable range of alternatives to be evaluated in this Draft EIR; and ultimately aid decision makers in preparing findings and overriding considerations, if necessary.

- Provide a housing project that results in the fewest environmental impacts while adding the maximum needed housing to the City's housing supply.

[13] City of Oakland, May 2015, *General Plan Designations*, https://cao-94612.s3.amazonaws.com/documents/General-Plan-Designations-20150519.pdf, accessed October 6, 2022.

[14] City of Oakland, June 1996, *City of Oakland General Plan, Open Space, Conservation, and Recreation Element*.

[15] City of Oakland, March 1998, *City of Oakland General Plan, Land Use and Transportation Element*.

[16] City of Oakland, *Planning Code*, Chapter 17.13, *RH Hillside Residential Zones Regulations*.

- Provide an architecturally distinctive housing project that will contribute positively to the residential character of this area of the Oakland Hills.
- Cluster housing on approximately 2.6 acres off Campus Drive to preserve and maintain the remaining 17.4 acres of the project site as open space to be held in perpetuity to balance the preservation of existing vegetation and wildlife habitat with wildfire prevention.
- Provide features to support or exceed the City's sustainability goals by using only LED light sources, and landscape with native and/or adaptive and drought-resistant plant materials.
- Create a project that addresses wildfire risks and minimizes impacts to wildfire ignition, emergency access, and evacuation and is in a location near existing ingress/egress to minimize increased evacuation time or emergency access response times.

3.4 PROPOSED PROJECT

Approval of the proposed project would result in the construction and operation of a residential development and associated roadway, parking, and landscaping, as well as the preservation of open space. The proposed development, construction and site preparation, and required permits and approvals are described in detail herein.

3.4.1 PROPOSED DEVELOPMENT

3.4.1.1 AREA OF DEVELOPMENT

While the project site is approximately 20 acres, construction and operation of the project site would occur on the 2.6 acres that front Campus Drive. As described in Section 3.3, *Project Objectives*, the remaining 17.4 acres of the project site would be provided as conservation open space in perpetuity. Accordingly, the description of the following proposed development features is limited to the 2.6-acre area, as shown on Figure 3-2, *Project Site and Area of Development*.

3.4.1.2 RESIDENCES

The proposed project would develop ten single-family detached homes on individual lots. The proposed lots would range from approximately 6,966 to 10,582 square feet. The ten lots would total approximately 81,650 square feet (1.87 acres), approximately 66 percent of the total development area. The homes would range from three to four levels in height. The proposed homes would be built into the hillside, and retaining walls would be constructed on the downslope areas on the eastern, southern, and western sides of the proposed development area. Each home would have west-facing private decks.

Each home would have a two-car garage fronting the proposed new public street (Viewcrest Lane). Homes one through five would be on the west side of the proposed public street and would have entry and garage access on the third or fourth floor. Homes six through ten would be on the east side of the proposed on-site street and would have entry and garage access on the first floor, as shown on Figure 3-3, *Conceptual Site Plan*.

3.4.1.3 ACCESS, CIRCULATION, AND PARKING

Pedestrian, bicycle, and vehicular access to the homes would occur via a new public street (Viewcrest Lane) off Campus Drive to the south. A new sidewalk would border both sides of Viewcrest Lane for pedestrian access. Two unpaved pedestrian trails for fire evacuation would be behind the proposed homes to the east and west and would connect to Campus Drive.

The proposed street would allow for two-way vehicle travel in and out of the project site, with a cul-de-sac turnaround. The new Viewcrest Lane would encompass 32,225 square feet (0.74 acres) of the project site, approximately 30 percent of the total developed area. Viewcrest Lane would extend roughly 600 feet from Campus Drive to the end of the cul-de-sac. The width of the street would range from 34 to 38 feet, and the cul-de-sac would be 70 feet in diameter, providing space for vehicles, including emergency vehicles, to turn around. The proposed street would slope southwest, with the lowest elevation (around 904 feet above sea level) at the intersection with Campus Drive and a 10 percent grade to its highest elevation at the end of the street (around 946 feet above sea level).

The proposed project would include a total of 20 off-street resident parking spaces via the two-car garages per unit and a total of 15 on-street guest parking spaces along Viewcrest Lane (see Figure 3-3).

3.4.1.4 LANDSCAPING

The proposed project would include landscaping and stormwater infrastructure throughout the development area. See Section 3.4.1.9, *Utilities and Service Connections*, for additional details.

Pursuant to the Preliminary Arborist Report, the proposed project would remove 77 trees, as recommended by the arborist.[17] The proposed project would plant approximately 145 new trees. The proposed project would be required to comply with OMC Chapter 12.36, *Protected Trees.* The trees to be removed include 34 coast live oak (*Quercus agrifolia*), 14 coast redwood (*Sequoia sempervirens*), 25 Monterey pine (*Pinus radiata*), three Italian stone pine (*Pinus pinea*), and one willow (*Salix* spp.). As shown on Figure 3-4, *Landscaping Plan*, the trees proposed to be planted would include 13 California buckeye (*Aesculus californica*), 50 western redbud (*Cercis occidentalis*), 24 coast live oak (*Quercus agrifolia*), and ten toyon (*Heteromeles arbutifolia*), which are native and very low water use; and 21 peppermint tree (*Agonis flexuosa*), 20 crepe myrtle (*Lagerstroemia*), and seven Shumard oak (*Quercus shumardii*), which are also low water use. All species would meet the City of Oakland standards, including native species and climate-adapted species. New trees would be planted primarily around the border of the project site, lining the roadway near the intersection of Viewcrest Lane and Campus Drive and on the backside of the homes to the east and west.

[17] *Preliminary Arborist Report*, prepared by HortScience, Inc., revised October 2022. See Appendix E, *Arborist Report*, of this Draft EIR.



Source: Google Earth, 2020. PlaceWorks, 2022.

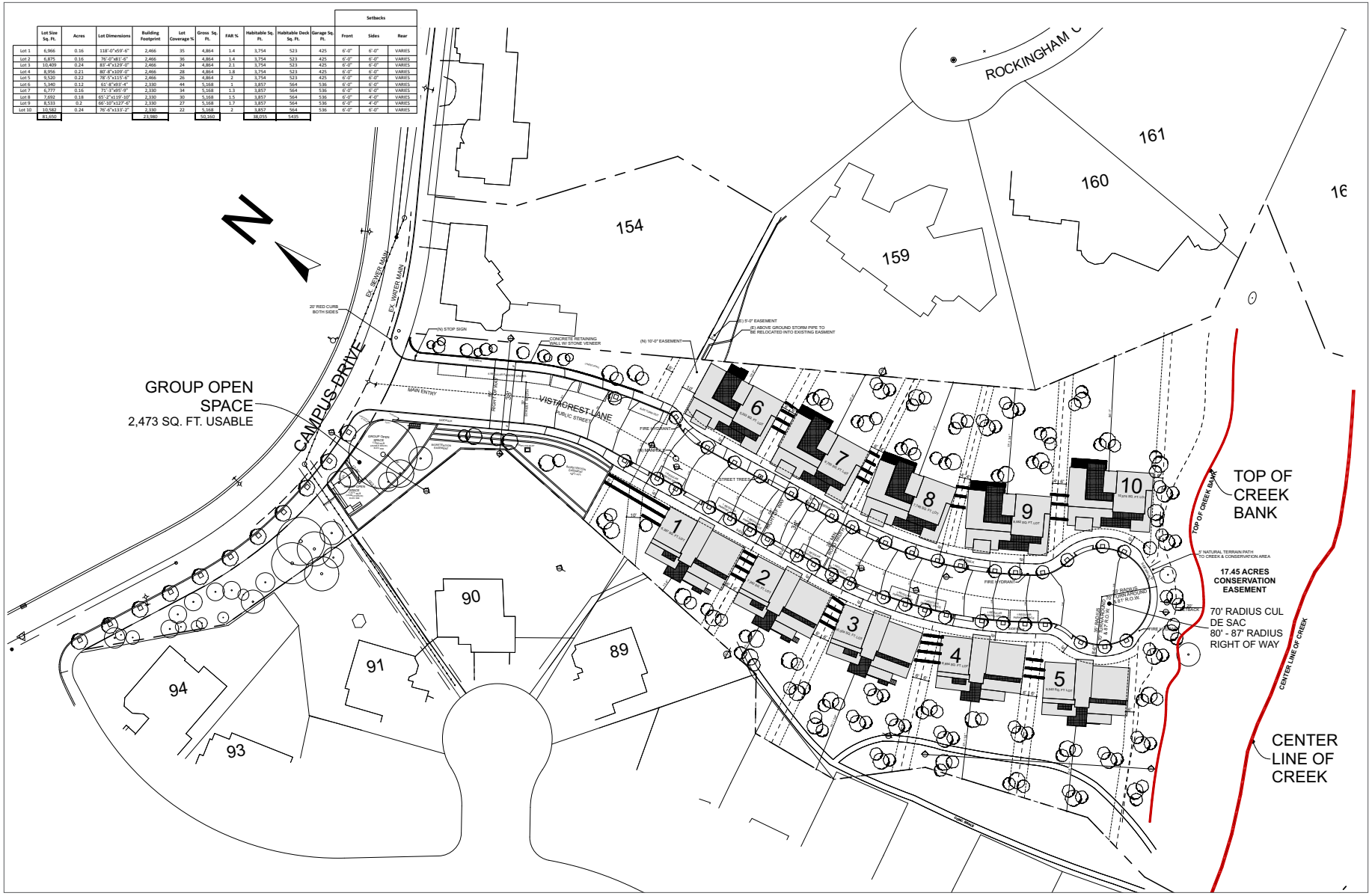
0 500
Scale (Feet)

Approximate Project Site Boundary

Approximate Area of Proposed Development

Figure 3-2
Project Site and Area of Development

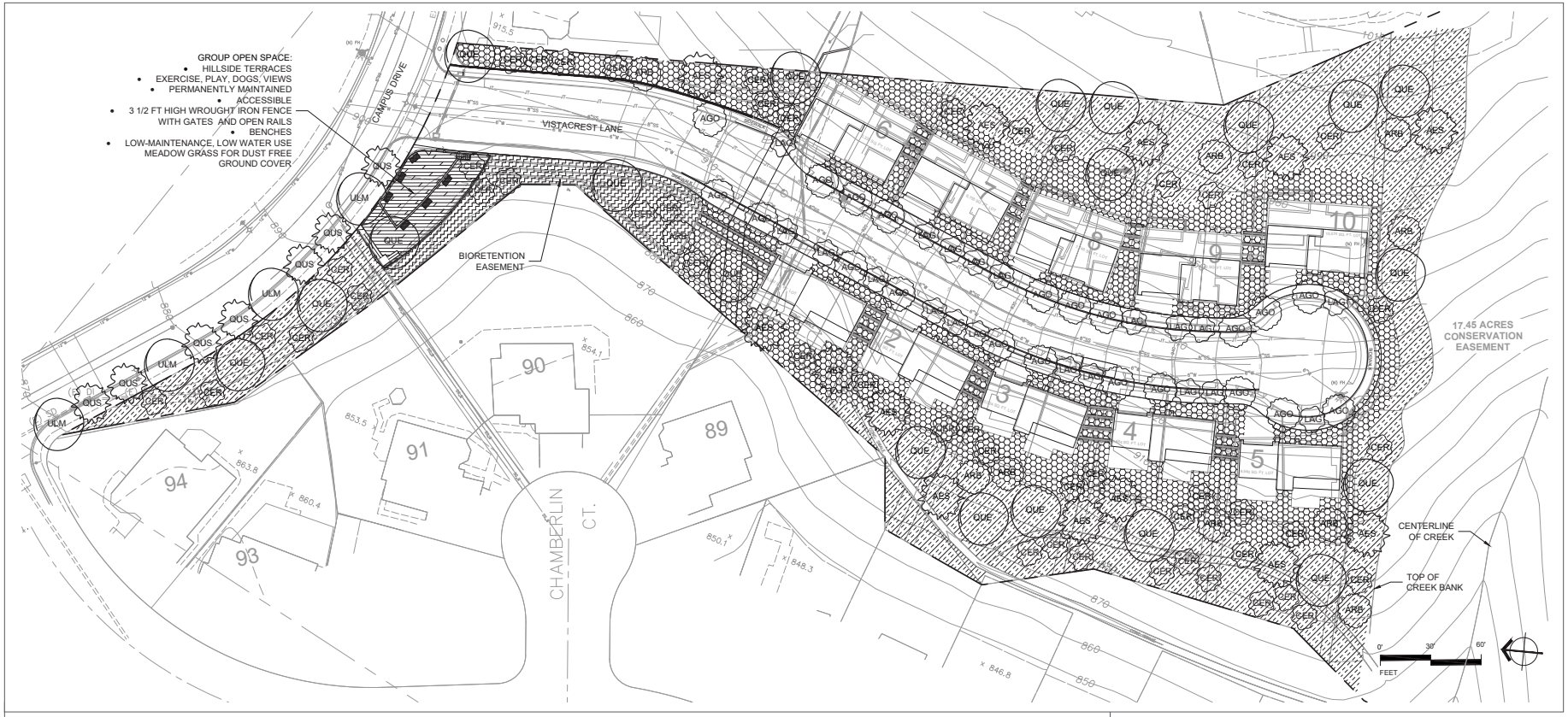
	Lot Size Sq. Ft.	Acres	Lot Dimensions	Building Footprint	Lot Coverage %	Gross Sq. Ft.	FAR %	Habitable Sq. Ft.	Habitable Deck Sq. Ft.	Garage Sq. Ft.	Setbacks		
											Front	Sides	Rear
Lot 1	6,966	0.16	118'-0"x59'-6"	2,466	35	4,864	1.4	3,754	523	425	6'-0"	6'-0"	VARIES
Lot 2	6,875	0.16	76'-0"x81'-6"	2,466	36	4,864	1.4	3,754	523	425	6'-0"	6'-0"	VARIES
Lot 3	10,409	0.24	83'-4"x129'-0"	2,466	24	4,864	2.1	3,754	523	425	6'-0"	6'-0"	VARIES
Lot 4	8,956	0.21	80'-4"x109'-0"	2,466	28	4,864	1.8	3,754	523	425	6'-0"	6'-0"	VARIES
Lot 5	9,520	0.22	78'-5"x115'-6"	2,466	26	4,864	2	3,754	523	425	6'-0"	6'-0"	VARIES
Lot 6	5,340	0.12	61'-8"x93'-4"	2,330	44	5,168	1	3,857	564	536	6'-0"	6'-0"	VARIES
Lot 7	6,777	0.16	73'-3"x95'-5"	2,330	34	5,168	1.3	3,857	564	536	6'-0"	6'-0"	VARIES
Lot 8	7,692	0.18	65'-2"x119'-10"	2,330	30	5,168	1.5	3,857	564	536	6'-0"	4'-0"	VARIES
Lot 9	8,533	0.2	66'-10"x127'-6"	2,330	27	5,168	1.7	3,857	564	536	6'-0"	4'-0"	VARIES
Lot 10	10,582	0.24	70'-6"x133'-2"	2,330	22	5,168	2	3,857	564	536	6'-0"	6'-0"	VARIES
	81,650			23,980		50,160		38,055	5435				



Source: Kotas/ Pantaleoni Architects, 2021.

Figure 3-3
Conceptual Site Plan

PROJECT DESCRIPTION



PRELIMINARY PLANT LEGEND

ABBRV	BOTANICAL NAME	COMMON NAME	CONTAINER SIZE	PLANT SIZE (HxW)	NATIVE	WATER USE
TREES						
AGO	AGONIS FLEXUOSA	PEPPERMINT TREE	24" BOX	20' X 20'		L
AES	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE	24" BOX	30' x 30'	X	VL
CER	CERCIS OCCIDENTALIS	WESTERN REDUBUD	24" BOX	15' x 15'	X	VL
LAG	LAGERSTROEMIA SPP.	CRAPE MYRTLE	24" BOX	15' X 15'		L
QUE	QUERCUS AGRIFOLIA	COAST LIVE OAK	24" BOX	40' x 40'	X	VL
QUS	QUERCUS SHUMARDII	SHUMARD OAK	24" BOX	20' X20'		L
ULM	ULMUS PARVIFOLIA	LACEBARK ELM	24" BOX	30' X 30'		L
SHRUBS						
	ACHILLEA MILLEFOLIUM	COMMON YARROW	1 GAL	2' x 2'	X	L
	ARCTOSTAPHYLOS SPP.	MANZANITA	5 GAL	6' x 6'	X	L
	BACCHARIS PILULARIS 'PIGEON POINT'	PIGEON POINT COYOTE BRUSH	5 GAL	6' x 1'	X	L
	ERIOGONUM FASCICULATUM	CALIFORNIA BUCKWHEAT	5 GAL	4' x 4'	X	VL
	FESTUCA CALIFORNICA	CALIFORNIA FESCUE	1 GAL	3' x 3'	X	L
	HETEROMELES ARBUTIFOLIA	TOYON	5 GAL	8' x 6'	X	L
	LUPINUS ALBIFRONS	SILVER BUSH LUPINE	5 GAL	3' x 3'	X	L
	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL	4' x 4'	X	L
	SALVIA SPATHACEA	HUMMINGBIRD SAGE	1 GAL	4' x 1'	X	L
	HYDROSEED	NATIVE EROSION CONTROL MIX + POPPIES, LUPIN & YARROW	PACIFIC COAST SEED		X	L
	BIOFILTRATION SPECIES	CAREX SPP., JUNCUS SPP.	1 GAL		X	L
	COMMON OPEN SPACE	MEADOW-NATIVE GRASS MIX	SEED OR SOD		X	L

NOTES:
WATER USE DESIGNATIONS: M=MODERATE WATER USE, L=LOW WATER USE. REFERENCE: WUCOLS
NATIVE SPECIES, REFERENCE: CNPS
NO INVASIVE SPECIES ARE USED. REFERENCE: CALIFORNIA INVASIVE PLANT COUNCIL INVENTORY
EROSION CONTROL AND MEADOW AREAS REQUIRE SEASONAL MOWING FOR FIRE SAFETY



FENCE CONCEPT

3-1/2 FOOT HEIGHT WROUGHT IRON FENCE WITH GATES AND OPEN RAILS TO MATCH ENTRIES



BENCH CONCEPT

METAL BENCH SIMILAR TO FENCE.



MEADOW CONCEPT

NATIVE GRASSES MIX, MOW OR LEAVE UNMOWED.



EROSION CONCEPT

NATIVE GRASSES & WILDFLOWERS

Source: Panoramic Design Group Landscape Architecture, 2021.

Figure 3-4
Landscaping Plan

Native erosion control, native grass mixes, and various shrubs would be planted throughout the project site. No invasive species listed by the California Invasive Plant Council would be used. The landscape design would comply with the City of Oakland landscaping regulations[18] and incorporate principles of Bay-friendly landscaping and integrated pest management practices. The proposed project would include 60,800 square feet of impervious regions, leaving 52,456 square feet of pervious areas (which would include landscaping, the group open space, and the bioretention area) out of the total 2.6-acre development area (e.g., concrete curb, walkways).

The irrigation system is designed to comply with the State Model Water Efficient Landscape Ordinance. It is designed to reduce water use to the lowest practical amount and to prevent runoff, low head drainage, and overspray. Separate valve systems would be used to irrigate each hydrozone, which are to be broken out into valve stations based on flow during the final design phase. The irrigation system would also incorporate heavy-duty water-conserving equipment, and backflow protection will be provided at the point of connection. A smart controller would provide evapotranspiration sensor data for scheduling.

3.4.1.5 LIGHTING AND GLARE-REDUCTION FEATURES

The source, intensity, and type of exterior lighting for the project site would generally be provided for the purpose of orienting the residents and guests on the site and for safety needs. Pursuant to Oakland Standard Condition of Approval (SCA) 19, *Lighting*, new exterior lighting fixtures would be required to be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties. In addition, bird-friendly glazing treatments are required as well as avoidance of bird-friendly attractants (e.g., landscaped areas) near glass unless shielded by architectural features, and avoidance of mirrors in landscape design.[19]

Examples of bird-friendly glazing treatments include use of opaque glass, glass surfaces covered with patterns or screens, ultraviolet (UV)-pattern reflective glass, shading of glass, or similar. All exterior surface and aboveground mounted fixtures would be complementary to the architectural theme and to the surrounding residential units.

3.4.1.6 BIRD-SAFE DESIGN FEATURES

The proposed project includes characteristics that fall under the City's criteria for requiring bird safety measures.[20, 21] Mandatory bird safety measures include specific glazing treatments for windows and light pollution-reduction measures identified in the City of Oakland Bird Safe Measures. As described in Section 3.4.1.5, *Lighting and Glare-Reduction Features*, the proposed windows would have bird-friendly glazing

[18] City of Oakland, *Planning Code*, Chapter 17.124, *Landscaping and Screening Standards.*

[19] City of Oakland, revised December 2020, *Standard Conditions of Approval*, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf, accessed October 6, 2022.

[20] City of Oakland, *Bird Safety Measures*. https://goldengateaudubon.org/wp-content/uploads/Oakland-Bird-Safety-Measures.pdf, accessed October 6, 2022.

[21] City of Oakland, revised December 2020, *Standard Conditions of Approval*, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf, accessed October 6, 2022.

treatments. Placement of bird-friendly attractions near glass would be avoided, and mirrors would be avoided altogether in the design of each home.

The project applicant would be required to submit a Bird Collision Reduction Plan for City review and approval prior to approval of a construction-related permit.[22]

3.4.1.7 WILDFIRE HAZARD-REDUCTION FEATURES

As previously described in Section 3.2.3, *Existing Site Conditions*, the project site is in a Local Responsibility Area and a very high fire hazard severity zone, the wildland-urban interface area, and the Oakland Wildfire Prevention District. Due to its location under these wildfire designations, the proposed project includes the following features for wildland fire safety.

- Construction. Pursuant to SCA-47, *Designated Very High Fire Severity Zone—Vegetation Management*, the project would ensure fire safety prior to and during construction and prohibit smoking during construction. The project applicant would ensure that the project contractor cuts, rakes, and removes all combustible ground-level vegetation to a height of six feet or less from the construction, access, and staging areas to reduce the threat of fire ignition pursuant to California Fire Code (CFC) Sections 304.1.1 and 304.1.2. The project applicant would also require the construction contractor to implement spark arrestors on all nonelectric construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation, and require that these engines be maintained in effective working order to help prevent fire pursuant to SCA-47 and Public Resources Code Section 4442, which restricts the type of equipment that can be used on grass- or brush-covered areas of the site. Pursuant to CFC Section 906, during construction, the contractor would have a minimum of three type-2A10BC fire extinguishers on the job site, with current State Fire Marshal service tags attached, and these extinguishers would be deployed in the immediate presence of workers for use in the event of an ignition. The project applicant would require the construction contractor to implement a no-smoking policy on the site and surrounding area during construction, pursuant to CFC Section 310.8.[23]
- Roadways and Trails. The proposed new roadway's width of 34 feet and cul-de-sac diameter of 70 feet have been designed to satisfy the minimum City requirements, as described in City of Oakland Public Works standards and the Oakland Fire Code (OMC Chapter 15.12, *Oakland Fire Code*). The proposed project's driveway and internal roadway are designed to current City standards and would accommodate the access requirements for both emergency and passenger vehicles. Sidewalks would be included on both sides of the proposed new street, and two unpaved pedestrian trails for fire evacuation would be to the east and west of the residential units, connecting to Campus Drive.
- Building Materials. All exterior building materials would be constructed to comply with the most recent wildland-urban interface building code (California Building Code Chapter 7A, *Materials and*

[22] City of Oakland, revised December 2020, *Standard Conditions of Approval*, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf, accessed October 6, 2022.

[23] City of Oakland, revised December 2020, *Standard Conditions of Approval*, accessed October 6, 2022, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf.

Methods for Exterior Wildfire Exposure) as ignition resistant, with noncombustible materials, impregnable vents, and double-paned windows with one pane of tempered glass.

- Fire Sprinklers and Alarms. The proposed project would comply with the National Fire Protection Association's fire protection system and would include fire sprinkler and standpipe systems.[24] As shown on Figure 3-3, hydrants for fire protection would be provided in three locations along the proposed new street.
- Vegetation Management of Developed Area. The proposed project would conform to General Plan Policies CO-10.1, *Flammable Vegetation Control*, and CO-10.2, *Fire Prevention Measures*, which require controlling flammable vegetation and reducing fire hazards through a range of preventive measures for property in the Oakland Hills and in high wildfire hazard areas. Landscaping and site planning would minimize future wildfire hazards. Pursuant to Public Resources Code Section 4291, the project would develop and maintain: defensible space from each side of a structure and maintain and space fuels so that wildfire burning under average weather conditions would be unlikely to ignite the structure; an ember-resistant zone for each structure; more intense fuel reduction between the fuel and the structure; trees, shrubs, and other plants adjacent or overhanging a building free of dead or dying wood; and the roof of structures free of leaves, needles, or other vegetative materials. CFC Chapter 49, *Requirements for Wildland-Urban Interface Fire Areas,* requires clearance of debris and vegetation within a prescribed distance from occupied structures in WUI areas; the development and approval of a fire protection plan; and specific wildfire requirements for landscaping plans. Pursuant to Oakland SCA-47, the project would prepare a site-specific vegetation management plan (VMP) for the purpose of mitigating the adverse effects of wildfire hazards and submit it for City review and approval prior to approval of a construction-related permit.[25] As designed, the proposed project incorporates fire prevention recommendations set out by the City's SCAs that would enable the project to pass the mandatory annual vegetation management inspection conducted by the Oakland Fire Department pursuant to City of Oakland Ordinance No. 11640. This includes minimum defensible space around all buildings and minimum setbacks from the street right-of-way. Defensible space requirements include clearing all hillsides of nonornamental vegetation within minimal distances from the residential structure, depending on the slope.[26]
- Evacuation. There are two evacuation routes for the proposed project, Campus Drive to Redwood Road, and Campus Drive to Keller Avenue. Campus Drive to Redwood Road (toward Merritt College) is a two- and four-lane roadway with sidewalks on both sides and some medians. Campus Drive to Keller Avenue is a two-lane road with sidewalks on both sides. Campus Drive is gradually sloped and does not contain sharp or narrow turns. The location of the project (at Campus Drive) allows for immediate ingress/egress to minimize increased evacuation time or emergency access response times.
- Other Fire Prevention Features. The City would require, through additional project-specific conditions of approval (COAs), that the future Homeowners Association (HOA) provide National Oceanic and

[24] NFPA 13 Standard for the Installation Sprinkler Systems, 2016; NFPA 22 Standard for Water Tanks for Private Fire Protection, 2013; NFPA 24 Standard for the Installation of Private Service Mains, 2016.

[25] City of Oakland, revised December 2020, *Standard Conditions of Approval*, accessed October 6, 2022, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf.

[26] City of Oakland, revised December 2020, *Standard Conditions of Approval*, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf, accessed October 6, 2022.

Atmospheric Administration (NOAA) All Hazards Weather Radios to each new homeowner when they move in. The NOAA All Hazards Weather Radios operate on a nationwide network of radio stations broadcasting weather information 24 hours a day directly from nearby National Weather Service offices. The NOAA All Hazards Weather Radios are the fastest way to receive warnings of severe weather, including wildfire.

Additionally, the project applicant proposes and the project COAs require the future HOA to provide each resident with an HOA Wildfire Information Packet that contains current information about evacuation preparedness and methods and require residents to download the AC Alert emergency notification system and sign up for the ZoneHaven Aware application. The future HOA would hold annual wildfire and evacuation training for all residences in the proposed development.

The future HOA would be responsible for the following in the common-use open space area:

- Installing and maintaining signage throughout the common-use open space areas reminding residents and their visitors that smoking is prohibited on high fire danger (red flag[27]) days.
- Maintaining signage that littering in the common-use open space areas is prohibited and providing and maintaining trash cans and fireproof cigarette disposal receptacles throughout the common-use open space area to reduce litter.
- Maintaining the landscaping in the common-use area to ensure there is no overgrowth of vegetation in this area.

The future HOA would also include the following regulations to support the VMP:

- Smoking is prohibited in the common-use open space areas on high fire danger (red flag) days.
- Open-flame barbecues and grills are prohibited on high fire danger (red flag) days.
- Storage under decks is not allowed.
- Storage of mulch, leaves, and needles or wood from wall exteriors is not allowed.
- Annual maintenance of roofs and gutters to keep them clear of fuel, such as leaves, needles, or dead wood, is required.
- Immediate removal of dead plant and tree material is required.
- Tree replacement shall ensure the canopy is no closer than 10 feet to the edge of a structure.
- All homeowners must maintain landscaping on their property with electric landscaping equipment (i.e., no internal combustion engines using hydrocarbon fuels are permitted). All landscaping firms hired by the HOA to maintain the common use open space must also use electric landscaping equipment.
- Prune trees up to 6 feet from the ground. For short trees, do not exceed one-third of the overall tree heights.
- No trees or ornamental vegetation are allowed within 5 feet of a structure.

[27] A Red Flag Warning means warm temperatures, very low humidity, and stronger winds are expected to combine to produce an increased risk of fire danger.

- Space trees 18 feet between crowns if within 5 to 30 feet of a structure, 12 feet between crowns if within 30 to 60 feet, and 6 feet between crowns if within 60 to 100 feet.

3.4.1.8 SUSTAINABILITY FEATURES

The proposed project would include several features that reduce greenhouse gas emissions and conserve energy to support the City's ability to meet its sustainability goals. These include the following:

- Photovoltaic Solar. The rooftops of buildings of the proposed project would include a photovoltaic solar array pursuant to the 2022 Building Energy Efficiency Standards.
- Energy-Conserving Features. The proposed project would include installation of ENERGY STAR appliances, efficient heating, ventilating, and air conditioning (HVAC) designs or systems, including operable windows and skylights to induce cross ventilation in at least one room in 80 percent of the units, and high-efficacy lighting.
- All Electric. The project applicant has opted for the proposed homes to be all electric and *not* include natural gas use or connections. Each home would include electric HVAC units and electric hot water heaters.
- Green Building. The proposed residential development would achieve, at a minimum, GreenPoint rating, and the proposed development would implement CALGreen Building Code mandatory measures for new residential construction, consistent with the OMC Chapter 18.02, *Sustainable Green Building Requirements for Private Development*, and the City's Standard Conditions of Approval.[28]
- Electric Vehicle Charging Stations. The proposed project would include the installation of electric vehicle (EV) charging stations. The proposed project would meet the number of EV charging stations required under the OMC Chapter 15.04, Article III, Part 11, *California Green Building Standards Code Non-Administrative (Technical) Amendments.* As described in Section 3.4.1.3, *Access, Circulation, and Parking*, the proposed project would include 20 off-street residential parking spaces. Pursuant to the OMC requirements, the proposed project would be required to install full-circuit EV charging electric infrastructure for two parking spaces, with electric panel capacity sufficient to supply four parking spaces.
- Landscaping Tree Cover. As discussed in Section 3.4.1.4, *Landscaping*, the proposed project would comply with OMC Chapter 12.36. The proposed project would increase landscaping on-site and increase the number of trees. This would increase tree canopy cover on-site with climate-adapted species to provide shade cover for both housing and hardscaped areas, reducing energy needed to cool the developed areas.
- Landscaping Water Use. All landscape zones would comply with OMC Chapter 18.01, *Water Efficient Landscaping Ordinance*. Water uses would be tailored to meet CALGreen Building Standards, which require water conservation and new buildings to reduce water consumption by 20 percent. Irrigation controls would use smart weather sensing technology to minimize irrigation water use.

[28] City of Oakland, revised December 2020, *Standard Conditions of Approval*, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf, accessed October 6, 2022.

3.4.1.9 UTILITIES AND SERVICE CONNECTIONS

Wastewater

Wastewater for Oakland is managed by the East Bay Municipal Utility District (EBMUD). Sanitary sewer lines convey wastewater to EBMUD's wastewater treatment plant in Oakland near the entrance of the San Francisco-Oakland Bay Bridge. The proposed project would include the installation of an eight-inch sanitary sewer line in the proposed street, Viewcrest Lane, which would connect to the eight-inch sanitary sewer line under Campus Drive, as shown on Figure 3-5, *Utilities Plan*.

Water Supply

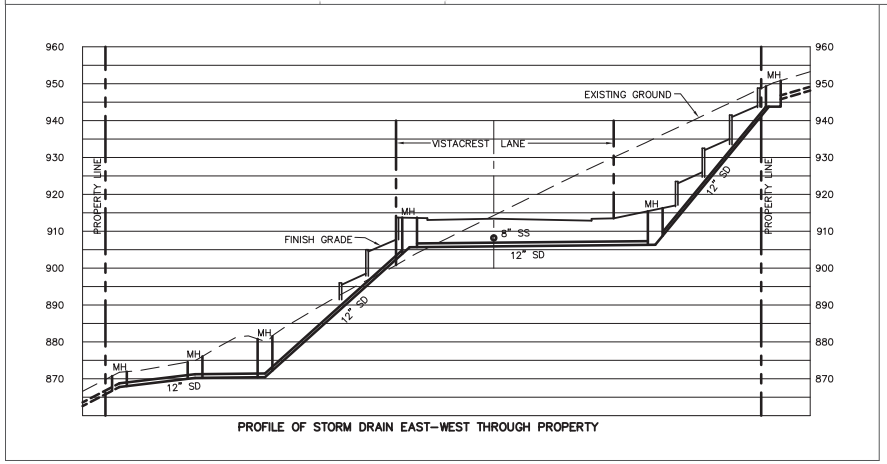
Water supply for Oakland is supplied and managed by EBMUD. The proposed project would construct a six-inch water line supplying water to each of the proposed homes along the proposed new street (Viewcrest Lane), which would connect to an existing 12-inch water line under Campus Drive. The proposed project would adhere to City-required on-site irrigation conservation standards.[29]

Stormwater Management

Stormwater on the project site would run to the west due to the slope of the hillside, and to the northwest due to the slope of the proposed Viewcrest Lane. None of the proposed project's impervious surface runoff would be directed to the existing swale/drainageway of the small ephemeral (seasonal) creek that runs east to west downslope of the project site. After proposed project construction, stormwater runoff from roofs would be routed to the private street frontage. All street frontage runoff would be conveyed to the northwest via a curb gutter to a drain inlet near the intersection of Viewcrest Lane and Campus Drive. A 2,850-square-foot bioretention planter would capture stormwater and function as both a water treatment area and a bioretention pond. Bioretention overflow would be connected to the City's existing storm drain inlet on the project site, which would discharge treated runoff to the existing concrete swale and pipe to a catch basin west of the project site. Of the 2.6-acre proposed development area, impervious regions consisting of roofs and pavement would total 60,800 square feet, and the remaining pervious regions would total 52,456 square feet.

[29] City of Oakland, *Code of Ordinances*, Chapter 15.36, *Green Building Requirements for City Building Projects and Traditional Public Works Projects*, Article II, *Civic Bay-Friendly Landscaping Requirements for All City Of Oakland, Redevelopment Agency and Public-Private Partnership Projects That Include Landscaping*.





Source: Moran Engineering, 2021.

Figure 3-5
Utilities Plan

Solid Waste

The proposed project would be required to use approved containers for solid waste, recyclable materials, and organic waste, in accordance with OMC Section 8.28.141, *Requirements for* Single Family Generators. Solid waste management for the City of Oakland is provided by Waste Management of Alameda County. Trash and compost is transferred to the Altamont Landfill in Livermore. The Altamont Landfill has a permitted daily disposal capacity of 11,150 tons per day and a remaining capacity of approximately 65,400,000 cubic yards.[30] Recycling services for the City of Oakland are provided by California Waste Solutions. The proposed project would be serviced by municipal waste and recycling providers.

Energy

The current project site would be served by existing electricity connections only. Electricity would be supplied to the project site via infrastructure maintained by the Pacific Gas and Electric Company (PG&E). East Bay Community Energy , EBCE), a locally controlled public agency that has a partnership with PG&E, would supply the electricity to the project site. The nearest PG&E substation to the project site is Palo Seco on Monterey Boulevard, approximately three miles northwest of the project site. The nearest electricity transmission lines are north of the project site along Shepherd Canyon Road.[31] The proposed project would require the construction or installation of new infrastructure and capacity-enhancing alterations to existing facilities to connect the new homes to electricity infrastructure. Construction activities use energy from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, motor vehicles transporting the construction crew, and smaller hand-held electric equipment such as power drills, table saws, and compressors. The operation of the proposed homes would use energy for cooling, heating, lighting, and landscape equipment and for vehicle trips to and from the project site. All energy infrastructure would be installed underground.

The proposed homes would be required to meet the current Building and Energy Efficiency Standards of the California Public Resources Code, Title 24, Part 6, that are in place at the time of construction. The standards are updated every three years and each new set of standards improve upon the previous set to require more energy efficiency for residential buildings.[32] In addition, the proposed homes would be required to meet the Green Building Compliance Standards for the City of Oakland, which includes meeting the Build It Green GreenPoint-Rated requirements for single-family residential new construction.

Energy-conserving features of the proposed project would include installation of ENERGY STAR appliances; efficient heating; HVAC designs or systems, including operable windows and skylights to induce cross-ventilation in at least one room in 80 percent of the units; and high-efficacy lighting. Each home would include solar panels, electric HVAC units, and electric hot water heaters. The project applicant has opted for the proposed homes to be all electric and *not* include natural gas use or connections.

[30] CalRecycle, 2019. SWIS Facility/Site Activity Details: Altamont Landfill & Resource Recovery (01-AA-0009), https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/7?siteID=7, accessed October 6, 2022.

[31] California Energy Commission, updated November 2021, California Electric Transmission Lines, https://tpc.maps.arcgis.com/home/item.html?id=260b4513acdb4a3a8e4d64e69fc84fee, accessed October 6, 2022.

[32] California Energy Commission, 2022, 2022 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency, accessed October 6, 2022.

3.4.2 OPEN SPACE

3.4.2.1 PRIVATE AND COMMON-USE OPEN SPACE

Included within the 2.6 acres of development would be a roughly 2,221-square-foot, group open space area at the intersection of Campus Drive and the proposed Viewcrest Lane. This area would be a series of hillside terraces offering passive recreational space, with benches and low-maintenance, low-water use meadow grass. The area would be surrounded by a 3.5-foot-high, wrought-iron fence with gate and open rails, accessible from Viewcrest Lane. This open space would be private and maintained by the future HOA. In addition, the homes would each have over 300 square feet of private usable open space that each homeowner is responsible for maintaining.

3.4.2.2 CONSERVATION OPEN SPACE

As previously described and identified in Section 3.3, *Project Objectives*, the proposed project would cluster the proposed development on approximately 2.6 acres off Campus Drive to provide the remaining 17.4 acres of the project site as conservation open space to be held in perpetuity to balance the preservation of existing vegetation and wildlife habitat with wildfire prevention. The project applicant would dedicate the 17.4 acres as a conservation open space to be maintained by a future HOA.

No actions that will materially impair the proposed conservation open space character of the land would be permitted. This includes activities that may destroy the unique physical and scenic characteristics of the land, such as the cutting of timber, trees, and other natural growth, except as may be required for fire prevention, thinning, elimination of diseased growth, and similar protective measures. No future trails or recreational features would be permitted for use by the HOA or other community members. The future HOA would be responsible for posting and maintaining signage informing the HOA members of the no-access requirement due to sensitive biological habitat.

Maintenance and management activities would include annual removal of invasive species spreading through various locations of this proposed conservation open space area and posing a threat to its future habitat quality. Specific techniques (biological, hand labor, mechanical, and chemical) will be used to manage the vegetation in the open space area.

3.4.3 CONSTRUCTION AND SITE PREPARATION

Construction is anticipated to be completed in one development phase over 15 months. The following sections describe the phases for the site preparation and construction of the proposed project, including the construction staging. These involve tree removal, grading, erosion and sedimentation control, and construction of the proposed residential units and infrastructure.

3.4.3.1 TREE REMOVAL

The 20-acre project site is currently covered in grassland and scrub habitat. Pursuant to the Preliminary Arborist Report, the proposed project would remove the 77 trees recommended by the arborist to accommodate proposed grading and development on the 2.6-acre development area. No trees are

proposed for removal on the proposed 17.4-acre conservation open space area. The proposed project would be required to comply with OMC Chapter 12.36.

3.4.3.2 SITE GRADING

The proposed project would require grading due to its location on the hillside. Approximately 12,700 cubic yards of soil would be excavated during site grading activities. About 8,600 cubic yards of soil would be used as fill, and 4,100 cubic yards of soil would be hauled from the project site to the nearest legitimate waste depository accepting the soil. The proposed roadway (Viewcrest Lane) would have a 10 percent grade from south to north. The homes on either side of the street would be built into the hillside, as described in Section 3.4.1.2, *Residences*.

3.4.3.3 EROSION AND SEDIMENTATION CONTROL

Construction of the proposed project would employ several techniques for erosion and sedimentation control, to reduce dust generation, soil erosion from the hillside, and sediment entering waterways and drains. The project site would have a stabilized construction entrance. Inlet filters would be used around new drain inlets, catch basins, and area drains. Gravel sacks would be used around existing drain inlets and catch basins, with filter fabric over the grates. Fiber rolls would be staked around the perimeter of the development area and along the sides of the new Viewcrest Lane. Temporary erosion-control blankets would be placed on slopes with various key entrenchments.

3.4.3.4 CONSTRUCTION EQUIPMENT

The project construction phase would use typical equipment such as a backhoe, a crane, aerial lifts, a generator, a diesel pump, dumpers, rollers, and pavers. No pile driving, rock blasting, or crushing would occur during the construction phase.

3.4.3.5 STAGING

During construction, vehicles, equipment, and materials would be staged and stored on a centrally located portion of the project site when practical. No long-term staging of equipment would occur around the perimeter of the site where adjacent to existing residential uses. No staging would occur in the public right-of-way. The construction site and staging areas would be clearly marked, and construction fencing would be installed to prevent disturbance and safety hazards. A combination of on- and off-site parking facilities for construction workers would be identified during demolition, grading, and construction.

3.4.4 GENERAL PLAN AND ZONING CONFORMITY

As described under Section 3.2.4.1, *General Plan*, the General Plan land use for this project is Resource Conservation. The proposed project, single-family homes, is not a type of development envisioned under this land use designation. The zoning on the project site (RH-1) was approved by the City Council after the 1998 General Plan Land Use and Transportation Element was adopted. As part of the City Council approval, the Council created the General Plan Land Use Consistency Determination. RH-1 allows single family homes on lots of one acre or more. The project applicant has submitted a request for a General

Plan Conformity Determination pursuant to Oakland Planning Code, Section 17.01.070, *Determination of General Plan Conformity by Director of City Planning*.

3.4.5 REQUIRED PERMITS AND APPROVALS

Following certification of the EIR and the approval of the proposed project by the City, the following discretionary permits and approvals from the City would be required for the proposed project:

- General Plan Conformity Determination[33]
- Tree Removal Permit
- Creek Protection Permit
- Building Permit
- Off Site Infrastructure (PX) Permit
- Planned Unit Development (PUD) Permit and Preliminary Development Plan (PDP)
- Final Development Plan

Approval of the project-specific VMP would be required by the Oakland Fire Department, and EBMUD would be responsible for the approval of the connections to existing infrastructure. A formal wetland delineation would also need to be prepared and submitted to the United States Army Corps of Engineers to verify whether the ephemeral creeks are regulated under Section 404 and Section 401 of the Clean Water Act. If the Alameda whipsnake is found on the project site, authorization from the California Department of Fish and Wildlife (CDFW) and United States Fish and Wildlife Services (USFWS) would be required for any disturbance to occupied Alameda whipsnake habitat or relocation of individual snakes outside the proposed development area. Authorizations would consist of an Incidental Take Permit under Section 2081 of the Fish and Game Code from the CDFW and either a Section 10 or Section 7 consultation with the USFWS under the Federal Endangered Species Act.

3.5 INTENDED USES OF THIS EIR

This EIR examines the environmental impacts of the proposed project. This EIR also addresses various actions by the City and others to adopt and implement the proposed project. It is the intent of this EIR to evaluate the environmental impacts of the proposed project, thereby enabling the City of Oakland, other responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements.

[33] City of Oakland, *Planning Code*, Section 17.01.070, *Determination of General Plan Conformity by Director of City Planning*.

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4. Environmental Analysis

CHAPTER ORGANIZATION

The environmental analysis is presented in Chapters 4.1 through 4.17 of this Draft EIR and evaluates the direct, indirect, and cumulative environmental impacts of the proposed project. The following sections describe the format of the environmental analysis, the thresholds of significance, mitigation measures, standard conditions of approval, and the cumulative impact methodology.

FORMAT OF THE ENVIRONMENTAL ANALYSIS

Chapters 4.1 through 4.17 of this Draft EIR are each organized with the following sections:

- Environmental Setting provides a description of the existing environmental conditions, providing a baseline against which the impacts of the proposed project can be compared, and an overview of federal, State, regional, and local laws and regulations relevant to each environmental issue.
- Thresholds of Significance refer to the quantitative or qualitative standards, performance levels, or criteria used to compare the existing setting with and without the proposed project to determine whether the impact is significant. These thresholds are based on the California Environmental Quality Act (CEQA) Guidelines Appendix G, *Environmental Checklist*, and the *City of Oakland CEQA Thresholds of Significance Guidelines* updated December 2020, and may also reflect established health standards, ecological tolerance standards, public service capacity standards, or guidelines established by agencies or experts.
- Impact Discussion gives an overview of the potential impacts of the proposed project and explains why impacts were found to be significant or less than significant prior to mitigation. This subsection also includes a discussion of cumulative impacts to the proposed project. Impacts and mitigation measures are numbered consecutively within each topical analysis and begin with an acronymic or abbreviated reference to the impact section.

  The environmental effects of the proposed project are analyzed for potential significant impacts in the following environmental issue areas, which are organized with the listed abbreviations.

- Aesthetics (AES)
- Air Quality (AIR)
- Biological Resources (BIO)
- Cultural and Tribal Cultural Resources (CUL)
- Energy (ENE)
- Geology and Soils (GEO)
- Greenhouse Gas Emissions (GHG)
- Hazards and Hazardous Materials (HAZ)
- Hydrology and Water Quality (HYD)
- Land Use and Planning (LU)
- Noise (NOI)
- Population and Housing (POP)
- Public Services (PS)
- Recreation (REC)
- Transportation (TRAN)
- Utilities and Service Systems (UTIL)
- Wildfire (WF)

The Draft Environmental Impact Report (EIR) identifies the impact statements alphanumerically, with the abbreviation followed by the number in the order of the analyzed impacts (e.g., AES-1 for the first listed impact statement in the Aesthetics chapter).

THRESHOLDS OF SIGNIFICANCE

As described previously, the significance criteria are identified before the impact discussion, under the heading, "Thresholds of Significance." For each impact identified, a level of significance is determined using the following classifications:

- *Significant (S)* impacts include a description of the circumstances where an established or defined threshold would be exceeded.
- *Less-than-significant (LTS)* impacts include effects that are noticeable, but do not exceed established or defined thresholds, or are mitigated below such thresholds.
- *No impact* describes the circumstances where there is no adverse effect on the environment.

For each impact identified as being significant, the EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would reduce the impact to a less-than-significant level successfully, this is stated in the EIR. However, significant and unavoidable (SU) impacts are described where mitigation measures would not diminish these effects to less-than-significant levels.

MITIGATION MEASURES

Mitigation measures are recommended where feasible and necessary to minimize a significant or potentially significant impact to less than significant. Similar to the organization of impacts in this Draft EIR, mitigation measures are alphanumerically organized based on the associated impact (e.g., for impact statement AES-1, if a mitigation measure were necessary, it would be labeled as Mitigation Measure AES-1).

STANDARD CONDITIONS OF APPROVAL

The City of Oakland's Standard Conditions of Approval (SCA), adopted in 2008 and updated in December 2020, are applied to projects when they receive discretionary planning-related approval and are incorporated into projects regardless of the project's environmental determination, pursuant to Public Resources Code Section 21083.3, *Application of Division to Approval of Subdivision Map or Other Project; Limitation; Mitigation Measures Under Prior Environmental Impact Report; Public Hearing; Finding*, and CEQA Guidelines Sections 15183, *Projects Consistent with a Community Plan or Zoning," and 15183.3, "Streamlining for Infill Projects*. The SCAs consist of three parts: (1) General Administrative Conditions pertaining to the administrative aspects of the project approval; (2) Environmental Protection Measures that substantially mitigate environmental effects; and (3) Other Standard Conditions containing requirements to substantially reduce the nonenvironmental impacts of the projects. The SCAs incorporate development policies and standards from various adopted plans, policies, and ordinances, including, but not limited to, the Oakland Planning and Municipal Codes, Oakland Creek Protection Ordinance, Stormwater Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System requirements, City of Oakland General Plan, California Building Code, Uniform Fire Code, Energy and Climate Action Plan, Complete Streets Policy, and Green Building Ordinance. The City may determine which SCAs are applied based on a project's characteristics.

The SCAs are adopted as requirements of a project and are designed to mitigate environmental effects, though for the purposes of CEQA analysis, the SCAs are considered requirements and not mitigation. Where SCAs are incorporated into the project and result in mitigation of environmental effects from a potentially significant impact to a less-than-significant impact, the impact will be determined to be less than significant with no mitigation measure required. Furthermore, where SCAs typically require technical studies to be prepared, these technical studies may also be required for detailed CEQA review. In the case that these technical studies are conducted for the purpose of CEQA review, and thus prior to project approval, project-specific recommendations for mitigation of environmental effects in the technical studies are considered implementation measures for the SCA rather than separate mitigation measures. The SCAs that are relevant to the proposed project are presented in the Regulatory Setting section for each environmental topic evaluated in Chapters 4.1 through 4.17 of this Draft EIR. The SCAs are presented as the abbreviation SCA followed by the number of the SCA, as listed in the *City of Oakland Standard Conditions of Approval,* dated December 16, 2020, and included as Appendix J, *Standard Conditions of Approval,* of this Draft EIR. For example, Aesthetic SCA-18, *Landscape Plan*, is shown as SCA-18.

CUMULATIVE IMPACT ANALYSIS

A cumulative impact consists of an impact created as a result of the combination of the proposed project evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. Section 15130, *Discussion of Cumulative Impacts,* of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." Used in this context, cumulatively considerable means that the incremental effects of an individual project are

considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Where the incremental effect of a project is not "cumulatively considerable," a lead agency need not consider that effect significant but must briefly describe its basis for concluding that the effect is not cumulatively considerable. Where the cumulative impact caused by the project's incremental effect and the effects of other reasonably foreseeable projects is not significant, the EIR must briefly indicate why the cumulative impact is not significant.

The cumulative impact discussions in Chapters 4.1 through 4.17 of this Draft EIR explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, city, county, watershed, or air basin). For example, in assessing noise-related impacts, the pertinent geographic study area is the distance from which the new development can be heard and may contribute to a significant cumulative noise impact. In assessing macro-scale air quality impacts, all development in the air basin contributes to regional levels of criteria pollutants, and basinwide projections of emissions is the best tool for determining the cumulative effect.

CEQA Guidelines Section 15130 outlines two approaches to analyzing cumulative impacts. The first is the "list" approach, which requires listing past, present, and reasonably anticipated future projects that produce related or cumulative impacts. The second is the "projections-based" approach, where the relevant growth projections in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions are summarized. A reasonable combination of the two approaches may also be used.

The cumulative impact analysis in this Draft EIR relies on a projections approach with respect to the City of Oakland General Plan and other regional service providers, supplemented by the list approach for the cumulative projects east of Interstate 580 within a two-mile range of the project site that, when considered with the effects of the proposed project, may result in cumulative effects. Table 4-1, *Reasonably Foreseeable Development Projects in the Vicinity of the Proposed Project*, shows the other reasonably foreseeable projects in Oakland in the vicinity of the proposed project.

TABLE 4-1 REASONABLY FORESEEABLE DEVELOPMENT PROJECTS IN THE VICINITY OF THE PROPOSED PROJECT

Record ID	Project	Address	Assessor's Parcel Number	Status
PLN15378-PUDF09	Oak Knoll Mixed Use Community	8750 Mountain Blvd, Oakland, CA 94605	043A467500321	Approved
PLN19316	MacArthur Studio, Senior Housing	4311 MacArthur Blvd, Oakland, CA 94619	030 198212100	Approved
PLN21241	Mixed-Use (residential/commercial) Structure in Crestmont neighborhood	11880 Skyline Blvd, Oakland, CA 94619	037A314908002	Under Review
PLN19244	Monopole Telecommunication Facility for Verizon Wireless	5650 Balmoral Dr, Oakland, CA 94546	085 010201400	Approved

Source: City of Oakland, May 2022, Oakland Planning Bureau / Major Projects List, https://oakgis.maps.arcgis.com/apps/mapviewer/index.html?webmap=4ec2a2b79c7f4f689e04550d7d6fa5a9, accessed October 6, 2022.

4.1 AESTHETICS

This chapter includes an evaluation of the potential environmental consequences related to aesthetics from construction and operation of the proposed project. It also describes the environmental setting, including regulatory framework and existing aesthetics in the vicinity of the proposed project.

4.1.1 ENVIRONMENTAL SETTING

4.1.1.1 REGULATORY FRAMEWORK

State Regulations

California Building Code

The State of California provides a minimum standard for building design through Title 24, Part 2, of the California Code of Regulations, commonly referred to as the California Building Code (CBC). The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. The CBC includes standards for outdoor lighting that are intended to improve energy efficiency, and to reduce light pollution and glare by regulating light power and brightness, shielding, and sensor controls.

California Building Code: CALGreen

The California Building Standards Commission adopted the California Green Building Standards Code, also known as CALGreen. As part of the CBC, CALGreen is in Part 11 of Title 24. CALGreen establishes building standards aimed at enhancing the design and construction of buildings using building concepts that reduce negative impacts and increase positive environmental impacts by encouraging sustainable construction practices. Specifically, Section 5.106.8, *Light Pollution Reduction*, establishes backlight, uplight, and glare ratings to minimize the effects of light pollution for nonresidential development. The local building permit process enforces the mandatory provisions of CALGreen.

California State Scenic Highway Program

California's Scenic Highway Program was created by the State of California legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State laws governing the Scenic Highways Program are found in the Streets and Highways Code, Sections 260 through 263. Scenic highway designation protects the scenic corridor from encroachment of incompatible land uses, preserves views of hillsides by minimizing development on them, and regulates items like billboards, signage, grading, and distance of development adjacent to the scenic highway, features of which may detract from the scenic quality.

Local Regulations

Oakland General Plan

The Scenic Highway Element of the Oakland General Plan promotes the preservation and enhancement of distinctively attractive roadways that traverse the city and the visual corridors surrounding them. It establishes a framework within which highways and roads can be identified as component parts of the Oakland Scenic Route System, to comply with State Government Code Section 65302 requiring a Scenic Highways Element be prepared as part of all cities' and counties' general plans, and to safeguard the scenic qualities of specific roadway systems in Oakland. In addition, other elements of the Oakland General Plan, including the Open Space, Conservation, and Recreation Element, and the Land Use and Transportation Element, also include policies and guidelines relating to aesthetics. These are outlined in Table 4.1-1, *Oakland General Plan Policies Relevant to Aesthetics and the Proposed Project*.

TABLE 4.1-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO AESTHETICS AND THE PROPOSED PROJECT

Policy No.	Text
Scenic Highways Element	
Specific Policies Related to MacArthur Freeway	
1	Signs within the scenic corridor that are visible from the freeway should be for identification purposes only; no advertising should be permitted.
2	Visual intrusions within the scenic corridor should be removed, converted, buffered or screened from the motorist's view.
3	Panoramic vistas and interesting views now available to the motorist should not be obliterated by new structures.
4	New construction within the scenic corridor should demonstrate architectural merit and a harmonious relationship with the surrounding landscape.
Open Space, Conservation, and Recreation Element	
OS-1.2	**Open space protection priorities for private land.** Conserve privately owned areas with important natural resource values through a combination of land acquisition and development controls. Use the following criteria when developing priorities for acquisition or protection: (a) steep hillside parcels over 10 acres in size; (b) parcels with significant biological resources including endangered specific habitat and native plant communities; (c) parcels which can potentially link together or expand existing open space areas; (d) visually prominent properties including ridgelines and other areas with high scenic value; and (e) properties where use of eminent domain is not required.
OS-1.3	**Development of hillside sites.** On large sites with subdivision potential, generally conserve ridges, knolls, and other visually prominent features as open space. Maintain development regulations which consider environmental and open space factors such as land stability, plant and animal resources, earthquake and fire hazards, and visual impacts, in the determination of allowable density. Where hillside development does occur, encourage creative architecture and site planning which minimizes grading and protects the natural character of the hills.
OS-4.3	**Protection of rural character.** Conserve the rural, open character of areas which have historically developed at very low densities, particularly those areas where the prevailing lot size is one acre or larger.
OS-9.1	**Protection of natural landforms.** Design new development to preserve natural topography and terrain. Enhance prominent topographic features where appropriate by parks, plazas, or architectural expressions.
OS-9.2	**Use of natural features to define communities.** Use open space and natural features to define city and neighborhood edges and give communities within Oakland a stronger sense of identity. Maintain and enhance city edges, including the greenbelt on the eastern edge of the city, the shoreline, and San Leandro Creek. Use creeks, parks and topographical features to help define neighborhood edges and create neighborhood focal points.

TABLE 4.1-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO AESTHETICS AND THE PROPOSED PROJECT

Policy No.	Text
OS-10.1	**View protection.** Protect the character of existing scenic views in Oakland, paying particular attention to views of the Oakland Hills from the flatlands; views of downtown and Lake Merritt; views of the shoreline; and panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations.
OS-10.2	**Minimizing adverse visual impacts.** Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.
OS-10.3	**Underutilized visual resources.** Enhance Oakland's underutilized visual resources, including the waterfront, creeks, San Leandro Bay, architecturally significant buildings or landmarks, and major thoroughfares.
OS-10.4	**Retention of City-Owned Open Space in Scenic Corridors.** Retain City-owned parcels adjacent to Skyline Boulevard, Shepherd Canyon Road, and other scenic roadways to preserve panoramic views, vegetation, and natural character.
CO-2.4	**Hillside cuts and fills.** Minimize hillside cuts and fills and the removal of desirable vegetation. Limit large-scale grading to those areas where it is essential to development. Where hillside grading does occur, reshape the terrain in smooth, naturally appearing contours rather than flat, terraced benches. Immediately replant and reseed graded areas to reduce soil loss.
CO-7.3	**Forested character.** Make every effort to maintain the wooded or forested character of tree-covered lots when development occurs on such lots.
Land Use and Transportation Element	
N3.8	**Required High-Quality Design.** High quality design standards should be required of all new residential construction. Design requirements and permitting procedures should be developed and implemented in a manner that is sensitive to the added costs of those requirements and procedures.
N3.9	**Orienting residential development.** Residential developments should be encouraged to face the street and to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings, respecting the privacy needs of residents of the development and surrounding properties, providing for sufficient conveniently located on-site open space, and avoiding undue noise exposure.
N7.2	**Defining compatibility.** Infrastructure availability, environmental constraints and natural features, emergency response and evacuation times, street width and function, prevailing lot size, predominant development types and height, scenic values, distances from public transit, and desired neighborhood character are among the factors that could be taken into account when developing and mapping zoning designation or determining "compatibility". These factors should be balanced with the citywide need for additional housing.
N9.3	**Maintaining a positive image.** The City should strive to maintain a positive and safe public image.
N9.7	**Creating compatible but diverse development.** Diversity in Oakland's built environment should be as valued as the diversity in population. Regulations and permit processes should be geared toward creating compatible and attractive development, rather than "cookie cutter" development.
T6.5	**Protecting scenic routes.** The City should protect and encourage enhancement of the distinctive character of scenic routes within the city, through prohibition of billboards, design review, and other means.

Source: City of Oakland, *City of Oakland General Plan*, *Scenic Highways Element* (September 1974), *Open Space, Conservation, and Recreation Element* (June 1996), and *Land Use and Transportation Element* (March 1998).

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to visual resources in Oakland. OMC Chapter 8.24, *Property Blight*, regulates against property blight, requiring a certain level of maintenance to preserve the livability, appearance, and stability of the city and promote the health, safety, and welfare of its citizens. A blighted property is defined as an abandoned building or structure which is not occupied, inhabited, used, or secured or a partially constructed, reconstructed or

demolished building or structure upon which work is abandoned; an attractive nuisance property; a building or structure in a state of disrepair; or an inadequately maintained property.

Title 17, Planning, of the OMC includes the Chapter 17.07, *Title, Purpose and Scope of the Zoning Code*, which, in addition to the General Plan, is the primary tool that shapes the form and character of physical development in Oakland. Chapter 17.13, *RH Hillside Residential Zones Regulations,* contains property development standards for hillside residential zones which enforce a certain level of consistency between these developments. Chapter 17.124, *Landscaping and Screening Standards,* prescribe standards for development and maintenance of landscaping and screening standards. Furthermore, Chapter 17.140, *Planned Unit Development Procedure*, states that upon receipt of the final development plan for a planned unit development, the City planning commission is to review and determine if the plan conforms to applicable design review criteria. As listed in Section 17.136.050, *Regular design review criteria*, for residential facilities, the proposed design should be well related to the surrounding area in its setting, scale, bulk, height, materials, and textures; protect, preserve, or enhance desirable neighborhood characteristics; be sensitive to the topography and landscape; relate to the grade of the hill in terms of design and massing; and conform with the Oakland General Plan and any applicable design review criteria.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCAs are related to aesthetics and are applicable to the proposed project:

- SCA-16. Trash and Blight Removal: The project applicant and his/her successors shall maintain the property free of blight, as defined in Chapter 8.24 of the OMC.
- SCA-18. Landscape Plan:
  a) Landscape Plan Required. The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of Chapter 17.124 of the Planning Code. Proposed plants shall be predominantly drought-tolerant. Specification of any street trees shall comply with the Master Street Tree List and Tree Planting Guidelines.
  b) Landscape Installation. The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid.
  c) Landscape Maintenance. All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

- SCA-19. Lighting: 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.

4.1.1.2 EXISTING CONDITIONS

Visual Character

Visual Features of the Project Site

As described in Chapter 3, *Project Description,* of this Draft EIR, the project site is in a hillside area in eastern Oakland consisting of primarily residential and open space land uses, between Campus Drive and Viewcrest Drive, and south across Campus Drive from Merritt Community College. The project site is currently undeveloped and covered in vegetation, including ornamental vegetation, woodlands, scrub, and grasslands, and includes a small ephemeral (seasonal) creek running east to west. The project site does not contain any built structures or pedestrian access.

Visual Features of the Areas Surrounding the Project Site

The surrounding area is largely residential, built around steep hills, with interspersed natural and open space areas. North of the project site, across Campus Drive, is Merritt Community College. Adjacent to the project site to the east and west are developed areas consisting of mostly one- to two-story single-family homes along Campus Drive, Viewcrest Drive, and Ridgemont Drive. Further east and west from these single-family homes is open space, including the Leona Canyon Regional Open Space Preserve to the east. South of the project site are multilevel townhomes and condominiums of the Monte Vista Villas.

Scenic Corridors

The portions of Interstate 580 (I-580) within the Oakland city limit have been officially designated as a scenic highway by the California Department of Public Transportation.[1] The City has also designated this route as the MacArthur Freeway Scenic Corridor, which runs for 12.4 miles in Oakland from the border with San Leandro to the San Francisco-Oakland Bay Bridge. The MacArthur Freeway Scenic Corridor is noted as especially attractive or notable because the districts it passes through are primarily residential with dense clusters of pastel homes and irregularly platted streets along the contours of the Oakland Hills, with undisturbed native hillsides that offer a visual counterpoint to urban development.[2] I-580 is approximately 0.25 miles south of the project site's easternmost border (and approximately 0.5 miles south of the project's proposed development area). The natural topography and existing mature trees on the site and adjacent properties between I-580 and the project site limit the open views of the project site and fully obstruct the views of the proposed development area from I-580.

[1] California Department of Transportation, 2018, *California State Scenic Highway Systems Map*, accessed October 7, 2022, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa.

[2] City of Oakland, September 1974, *City of Oakland General Plan*, *Scenic Highways Element*.

Scenic Vistas

With the location in the Oakland Hills, the project site and its surrounding areas have westward views toward Oakland and the San Francisco Bay. While some of these areas may offer scenic views, the project site and surrounding developments are private property; there are no public scenic vistas on the project site or immediately adjacent areas. The project site is not visible from the nearby Leona Canyon Regional Open Space Preserve due to the natural topography and existing mature trees on the site and adjacent properties between the open space preserve and the project site. Expansive views of the Oakland Hills, natural areas along the shoreline of San Francisco Bay, and the San Francisco city skyline and other landmarks adjacent to the Bay are generally considered scenic views.

Light and Glare

Because the project site is undeveloped, the existing sources of light and glare are associated with the nearby land uses and roadways. There are moderate sources of light from the existing homes and street lights; likewise, the sources of glare from residential windows and automobiles parked on the street or in driveways are also moderate. The major sources of light and glare include the Merritt Community College campus buildings and parking lots. Most sources of light on the adjacent properties in the hillside area are beneath the existing tree canopy and views are limited.

4.1.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant aesthetic impact if it would:

1. Have a substantial adverse effect on a public scenic vista. *[Note: Only impacts to scenic views enjoyed by members of the public generally (but not private views) are potentially significant]*
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway.
3. Substantially degrade the existing visual character or quality of the site and its surroundings.
4. Create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area.
5. 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 to 25986).
6. 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.
7. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space.
8. Cast shadow on an historic resource, as defined by CEQA Guidelines Section 15064.5(a), such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of

Historical Resources, Local Register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5.

9. 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 Building Code addressing the provision of adequate light related to appropriate uses.
10. Create winds that exceed 36 mph for more than one hour during daylight hours during the year. [*Note: 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. Downtown is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south and I-980/Brush Street to the west. The wind analysis must consider the project's contribution to wind impacts to on- and off-site public and private spaces. Only impacts to public spaces (on- and off-site) and off-site private spaces are considered CEQA impacts. Although impacts to on-site private spaces are considered a planning-related non-CEQA issue, such potential impacts still must be analyzed*]
11. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to aesthetics.

4.1.3 IMPACT DISCUSSION

AES-1	The proposed project would not have a substantial adverse effect on a public scenic vista.

Scenic vistas are generally interpreted as long-range views. As described in Section 4.1.1.2, *Existing Conditions,* the project site has westward views toward downtown Oakland and the San Francisco Bay, both of which are approximately six miles west of the project site. These public vistas are viewed by the existing residents and their guests to the east and west of the site, students and employees of Merritt College, visitors to the Leona Canyon Regional Open Space Preserve, and pedestrians and motorists traveling on Campus Drive. Expansive views of the Oakland Hills (approximately 1.5 miles east of the project site) from lower public viewing areas are generally considered scenic views, and the City of Oakland General Plan encourages the protection of views of the Oakland Hills from the flatlands through the use of development review and careful zoning. However, the project site is on private property in a densely vegetated hillside area and is surrounded mostly by developed residential properties and private undeveloped open space areas. Due to the location and the sloped topography, the site is not highly visible from surrounding areas and does not contribute to a public scenic vista. The construction of ten residential units on the 2.6-acre development area is consistent with the RH-1 zoning for the site. The three-story homes would be built into the hillside, and although the homes would be visible from neighboring residential properties, no existing scenic vistas or views would be substantially affected. No development would occur on the proposed 17.4-acre conservation open space. Because there are no public scenic vistas on the project site or immediately adjacent areas to the project site and the natural

topography and existing mature trees on the site and adjacent properties limit the open views of these scenic resources as well as views of the site from these scenic resources, impacts to views of scenic vistas to and from the project site are considered *less than significant*.

Significance without Mitigation: Less than significant.

AES-2 The proposed project would not substantially degrade scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state or locally designated scenic highway.

Unlike scenic vistas described in Impact Discussion AES-1 that are generally interpreted as long-range views, scenic corridors may provide short-, middle-, and/or long-range views. As described in Section 4.1.1.2, *Existing Conditions*, I-580 is a Caltrans officially designated scenic highway and a City of Oakland Scenic Corridor approximately 0.25 miles south of the project site (and approximately 0.5 miles south of the project's proposed development area). While views of the portion of project site proposed for a conservation open space could be potentially visible from the MacArthur Freeway Scenic Corridor through filtered views broken by the tree line and residential development off of Leona Drive on I-580 between the project site and I-580, no changes to this area are proposed.

The proposed project would develop ten new homes on a 2.6-acre portion of the site off of Campus Drive, and the development would blend with surrounding uses, particularly as seen from distant vantage points. Regardless, the proposed development area would not be visible due to the natural topography and existing mature trees on the site and adjacent properties. Accordingly, there would be a *less-than-significant* impact to scenic resources within a state or locally designated scenic highway.

Significance without Mitigation: Less than significant.

AES-3 The proposed project would not degrade the existing visual character or quality of the site and its surroundings.

The existing visual character of the site is described in Section 4.1.1.2, *Existing Conditions*. As described, the undeveloped project site, including the proposed development area, is on a hillside and covered with vegetation and trees. The portion of the site that is proposed for a conservation open space also includes a small ephemeral creek running east to west. The area proposed for development is located between existing hillside residential developments to the east and west of the site. The portion of the project site that is not proposed for development is surrounded by existing hillside residential development to the east and west, and open space to the south.

The project site is designated with RH-1 zoning, which allows residential densities compatible with the surroundings. The proposed development includes the required setbacks from public rights-of-way, with a tiered approached to the design of the home on the eastern side of the proposed Viewcrest Lane. These homes feature a 10-foot building height at the setback line, and gradually increase to 32 feet at maximum height above the sidewalk. Landscaping would include a mixture of native and climate-appropriate trees, shrubs, and groundcover with deer resistance.

Figure 4.1-1, *West Aerial View from Viewcrest Drive*, and Figure 4.1-2, *Viewcrest Estates View from Entry*, show the existing conditions of the project site and renderings of the proposed project from these viewpoints. The proposed project would be visually compatible with the surrounding residential neighborhoods to the east and west of the site. Many of the homes would not be visible from Campus Drive due to the change in elevation and because of the shape and topography of the site. The City will consider final specific design aspects of the project, such as height, massing, and setbacks, during the site development review process. Design review would ensure that the proposed project would be compatible with surrounding areas and protect, preserve, or enhance desirable neighborhood characteristics. However, the proposed project is considered visually compatible with the existing surrounding development pattern.

The proposed project would remove trees from the project site and plant new street trees throughout the site, as required by the City. The removal of the existing natural vegetation and trees and grading of the sloping topography would be the most substantial change to the project site. However, these changes would not substantially degrade the existing visual quality or character of the site and its surroundings. Furthermore, the remaining 17.4 acres owned by the applicant would be conserved as open space and would remain in natural condition.

The proposed project would be required to comply with SCA-16, *Trash and Blight Removal*; SCA-18, *Landscape Plan*; and SCA-19, *Lighting*. Pursuant to SCA-16, the project site must be free of blight as defined in Chapter 8.24 of the OMC. A full landscape plan is required to be submitted to the City, with proposed plants needing to be predominantly drought tolerant, pursuant to SCA-18. The proposed project would be required to comply with SCA-19, further described in Impact Discussion AES-4. As a planned unit development, the proposed project would also be required to comply with OMC Chapter 17.140 and Section 17.136.050 and would undergo design review.

Because the proposed project, a ten-unit, clustered residential development, would be developed in an area with similar hillside residential developments to the east and west, and would preserve the land to the south that connects to other open space parcels as permanent open space, the proposed project would be compatible with the surrounding existing setting. In addition, compliance with the Oakland SCAs previously described would ensure that the proposed project would not substantially degrade the character or quality of the site or its surroundings, or conflict with an applicable zoning and other regulations governing scenic quality. Furthermore, compliance with the City's design review process would ensure the proposed project would be compatible with the visual setting of the surrounding area. Therefore, development of the proposed project would not substantially degrade the visual quality of the site or its surroundings, and associated impacts would be *less than significant*.

Significance without Mitigation: Less than significant.



Source: PlaceWorks, 2022.

Figure 4.1-1
West Aerial View from Viewcrest Drive





Source: PlaceWorks, 2022.

Figure 4.1-2
Viewcrest Estates View from Entry

AES-4 The proposed project would not create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area.

Nighttime illumination and glare impacts are the effect on adjoining uses and areas from a project's exterior lighting. Light and glare impacts are determined through a comparison of the existing light sources with the proposed lighting plan or policies. Existing sources of nighttime illumination include street and parking area lights, and exterior lighting on existing commercial buildings. Additional light and glare in the overall area is caused by adjacent land uses and traffic on surrounding roadways.

As described in Chapter 3, *Project Description*, of this Draft EIR, the source, intensity, and type of exterior street lighting for the proposed development area on the project site would generally be provided for the purpose of orienting residents and their visitors and for safety needs along the streets and sidewalks and would be typical for single-family homes. The proposed project would also introduce new sources of light from residential windows. However, new sources of light and glare associated with the proposed project would not be substantial in the context of existing lighting sources, which are similar to the proposed development.

In addition, daytime glare would not be substantial because the proposed windows would be required to have low reflectivity glass, and none of the proposed building materials would consist of highly reflective materials. The proposed homes would be built into the hillside and set back from Campus Drive, limiting potential effects of light and glare. Development of the project site would involve sources of light associated with vehicle headlights entering and exiting the project site. However, the new sources of light and glare would be consistent with the type of lighting anticipated for the project site pursuant to the Hillside Residential (RH-1) zoning on the project site. In landscaped and paved areas, light sources would be recessed or concealed to prevent unnecessary glare onto the public right-of-way and reduce visibility of the light source. SCA-19, *Lighting,* requires new exterior lighting fixtures to be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties. All permanent on-site lighting of the proposed project would be low-level illumination, directed downward, and shielded to reduce light spill or glare into surrounding residential homes.

Although the proposed project would introduce new sources of light, the light would be downward-facing and shielded away from nearby receptors, and therefore would not adversely affect neighboring residents. The proposed project would be compliant with SCA-19, *Lighting*, requiring new exterior lighting fixtures included in proposed projects to be shielded to a point below the light bulb and reflector in order to prevent excessive glare onto adjacent properties. New sources of light and glare would be consistent with the type of lighting anticipated for the project site pursuant to the Oakland General Plan land use and zoning designations for the site. For these reasons, impacts of the proposed project related to light and glare would be *less than significant*.

Significance without Mitigation: Less than significant.

AES-5	The proposed project would not introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Sections 25980-25986).

As discussed in Chapter 3, *Project Description*, of this Draft EIR, the proposed project proposes the planting of approximately 145 new trees throughout the project site. Proposed trees to be planted would include California buckeye (*Aesculus californica*), western redbud (*Cercis occidentalis*), coast live oak (*Quercus agrifolia*), and toyon (*Heteromeles arbutifolia*), which are native and very low water use, and peppermint tree (*Agonis flexuosa*), crepe myrtle (*Lagerstroemia*), and Shumard oak (*Quercus shumardii*), which are low water use. Furthermore, due to the project's location in a very high wildfire severity zone, a vegetation management plan would be required that would require the routine maintenance and trimming and thinning of trees. See Chapter 4.17, *Wildfire*, of this Draft EIR for additional discussion of the vegetation management plan. While some of the single-family residential homes in the vicinity of the project site have solar collectors, the proposed trees at maturity would be of similar heights and distance to the existing homes and would not cast shadows on or impair these solar collector. The HOA would maintain the proposed landscaping and enforce management practices that protect solar collectors on existing properties from shadows. These practices would keep the proposed project in compliance with Oakland General Plan Policy CO-7.3, *Forested Character*, and Policy N-3.9, *Orienting Residential Development*, which promote the replacement of removed trees and the avoidance of excessive shading on neighboring properties. Therefore, the proposed project would have a *less-than-significant* impact on existing solar collectors.

Significance without Mitigation: Less than significant.

AES-6	The proposed project would not cast shadows that substantially impair the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors.

As described in Impact Discussion AES-5, the proposed landscaping would not interfere with existing solar features on adjacent residential homes. The proposed project would construct residential buildings on a sloping hillside that would not exceed 30 feet in height. The proposed project would not contain elements or building heights that would cast shadows or impair existing solar collectors on nearby homes. The buildings would largely be built into the existing hillsides and would not rise above other homes nearby. The proposed landscaping on the site would not obstruct solar features of the proposed project. As described in Chapter 3, *Project Description,* and in Chapter 4.17, *Wildfire*, of this Draft EIR, the wildfire regulations for defensible space restrict the amount of landscaping that can grow in close proximity to the proposed buildings and have strict requirements for maintaining the landscaping, which would further support preventing shadows from landscaping. Therefore, the proposed project would have a *less-than-significant* impact on existing or proposed solar collectors.

Significance without Mitigation: Less than significant.

AES-7	**The proposed project would not cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space.**

As described in Chapter 3, *Project Description*, of this Draft EIR, the proposed project would provide common use open space and conservation open space. The common-use open space would include trees to provide shade to enhance this space and not impair its beneficial uses. The proposed homes or common-use structures developed as part of the proposed project would not cast a shadow on this open space. Therefore, the impact of shadows on open space would be *less than significant*.

Significance without Mitigation: Less than significant.

AES-8	**The proposed project would not cast shadow on an historic resource, as defined by CEQA Guidelines Section 15064.5(a), such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, Local Register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5.**

As discussed in Chapter 4.4, *Cultural and Tribal Cultural Resources*, of this Draft EIR, there are no historical resources on or near the project site. Accordingly, the proposed project would have *no impact* in this regard.

Significance without Mitigation: No impact.

AES-9	**The proposed project would not 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 Building Code addressing the provision of adequate light related to appropriate uses.**

The proposed project would not require any exceptions to applicable regulations or fundamentally conflict with City policies that address the provision of adequate light. The project would have *no impact* on the provision of adequate light.

Significance without Mitigation: No impact.

AES-10	The proposed project would not create winds that exceed 36 mph for more than one hour during daylight hours during the year.

Pursuant to the City's adopted procedures, wind analysis only needs to be conducted if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (1) the project is adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt, or San Francisco Bay); or (2) the project is in Downtown. The project site does not exhibit these characteristics. Therefore, the proposed project would have *no impact* in this regard.

Significance without Mitigation: No impact.

AES-11	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to aesthetics.

The analysis of cumulative aesthetic impacts is based on impacts of the proposed project plus developments within the vicinity of the proposed project. None of the proposed projects identified in Table 4-1, *Reasonably Foreseeable Development Projects in the Vicinity of the Proposed Project*, in Chapter 4, *Environmental Analysis*, of this Draft EIR, are within the viewshed of the proposed project. The proposed project would be in an area surrounded by existing residential development and would be required to undergo design review by the City to ensure compatibility with surrounding land uses, scenic highways, and existing visual character. The proposed project would increase the amount of light and glare in the project site vicinity, but it would be similar to that of other residential neighborhoods and would follow the required regulations and ordinances intended to reduce light spillage effects. Although the project proposes to plant new trees throughout the project site, which may cast shadows, the shadows would not substantially impair the beneficial use of solar collectors, open space, or historic resources. Implementation of Oakland General Plan policies, OMC requirements, and Oakland SCAs would ensure that the proposed project would not generate any significant aesthetic impacts. Any other development projects in the vicinity would be subject to design review by the City where applicable, and would be required to conform to zoning requirements and General Plan policies regarding community character and visual appearance. Thus, the proposed project would not have a cumulatively considerable impact related to aesthetics, and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.2 AIR QUALITY

This chapter includes an evaluation of the potential environmental consequences related to air quality from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing air quality in the vicinity of the proposed project.

Construction criteria air pollutant emissions modeling is in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft Environmental Impact Report (EIR). The health risk assessment (HRA) prepared for the proposed project is in Appendix C, *Construction Health Risk Assessment*, of this Draft EIR.

4.2.1 ENVIRONMENTAL SETTING

4.2.1.1 AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

Pollutants emitted into the ambient air by stationary and mobile sources are regulated by Federal and State law under the Federal Clean Air Act (CAA) and California CAA, respectively. The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, nitrogen dioxide (NO_2), PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. ROG and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and NO_2 are the principal secondary pollutants. Table 4.2-1, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

TABLE 4.2-1 CRITERIA AIR POLLUTANT HEALTH EFFECTS SUMMARY

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	▪ Chest pain in heart patients ▪ Headaches, nausea ▪ Reduced mental alertness ▪ Death at very high levels	▪ Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Ozone (O_3)	▪ Cough, chest tightness ▪ Difficulty taking a deep breath ▪ Worsened asthma symptoms ▪ Lung inflammation	▪ Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO_2)	▪ Increased response to allergens ▪ Aggravation of respiratory illness	▪ Same as carbon monoxide sources

TABLE 4.2-1 CRITERIA AIR POLLUTANT HEALTH EFFECTS SUMMARY

Pollutant	Health Effects	Examples of Sources
Particulate Matter (PM_{10} and $PM_{2.5}$)	▪ Hospitalizations for worsened heart diseases ▪ Emergency room visits for asthma ▪ Premature death	▪ Cars and trucks (particularly diesels) ▪ Fireplaces and woodstoves ▪ Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO_2)	▪ Aggravation of respiratory disease (e.g., asthma and emphysema) ▪ Reduced lung function	▪ Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	▪ Behavioral and learning disabilities in children ▪ Nervous system impairment	▪ Contaminated soil

Sources: California Air Resources Board, 2022. Common Air Pollutants: Air Pollution and Health, https://ww2.arb.ca.gov/resources/common-air-pollutants, accessed October 27, 2022. South Coast Air Quality Management District, May 2005. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf, accessed October 27, 2022.

- Carbon Monoxide (CO) is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.[1]
- Reactive Organic Gases (ROGs)/Volatile Organic Compounds (VOCs) are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as O_3. There are no AAQS established for ROGs. However, because they contribute to the formation of O_3, the Bay Area Air Quality Management District (BAAQMD) has established a significance threshold for this pollutant.
- Nitrogen Oxides (NO_x) are a by-product of fuel combustion and contribute to the formation of O_3, PM_{10}, and $PM_{2.5}$. The two major components of NO_x are nitric oxide (NO) and NO_2. The principal component of NO_x produced by combustion is NO, but NO reacts with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. NO_2 absorbs blue light; the result is a brownish-red

[1] Bay Area Air Quality Management District, May 2017, *California Environmental Quality Act Air Quality Guidelines,* https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed October 27, 2022.

cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure.[5] NO_2 acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 parts per million (ppm).[5]

- **Sulfur Dioxide (SO_2)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When SO_2 forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue.[2]
- **Suspended Particulate Matter (PM_{10} and $PM_{2.5}$)** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. In the San Francisco Bay Area Air Basin (SFBAAB), most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch). Diesel particulate matter (DPM) is also classified as a carcinogen.

  Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM_{10} bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. The United States Environmental Protection Agency (USEPA) scientific review concluded that $PM_{2.5}$ penetrates even more deeply into the lungs, and this is more likely to contribute to health effects—at concentrations well below current PM_{10} standards. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing). Motor vehicles, wood burning in fireplaces, and stoves are all large sources of fine particulates.
- **Ozone (O_3)** is commonly referred to as "smog" and is a gas that is formed when ROGs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions to the formation of this pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. O_3 levels usually build up during the day and

[2] Bay Area Air Quality Management District, May 2017, *California Environmental Quality Act Air Quality Guidelines,* https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed October 27, 2022.

peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. O_3 can also damage plants and trees and materials such as rubber and fabrics.[3]

- Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phasing out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Because emissions of lead are found only in projects that are permitted by BAAQMD, lead is not an air quality of concern for the proposed project.

Toxic Air Contaminants

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal CAA (42 US Code Section7412[b]) is a TAC. Under state law, the California Environmental Protection Agency (CalEPA), acting through the California Air Resources Board (CARB), is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform an HRA and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

[3] Bay Area Air Quality Management District, May 2017, *California Environmental Quality Act Air Quality Guidelines,* https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed October 27, 2022.

CARB has formally identified over 200 substances and groups of substances as TACs.[4] Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

In 1998, CARB identified DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.

4.2.1.2 REGULATORY FRAMEWORK

Federal, State, and local air districts have passed laws and regulations intended to control and enhance air quality. Land use in the city is subject to the rules and regulations imposed by USEPA, CARB, CalEPA, and BAAQMD. Federal, State, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized herein.

Federal and State Regulations

AAQS have been adopted at federal and state levels for criteria air pollutants. In addition, both the federal and State governments regulate the release of TACs. The City of Oakland is in the SFBAAB and is subject to the rules and regulations imposed by BAAQMD, the National AAQS adopted by the USEPA, and the California AAQS adopted by CARB.

Ambient Air Quality Standards

The federal CAA was passed in 1963 by the United States Congress and has been amended several times. The 1970 federal CAA amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting national AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution sources. The California CAA, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

[4] California Air Resources Board, 2022, CARB Identified Toxic Air Contaminants, https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants, accessed October 27, 2022.

AIR QUALITY

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 4.2-2, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and Pb. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

TABLE 4.2-2 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard [a]	Federal Primary Standard [b]	Major Pollutant Sources
Ozone (O_3) [c]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$) [d]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4) [e]	24 hours	25 µg/m^3	*	Industrial processes.

TABLE 4.2-2 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard [a]	Federal Primary Standard [b]	Major Pollutant Sources
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which 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, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Notes: ppm: parts per million; µg/m³; micrograms per cubic meter; *Standard has not been established for this pollutant/duration by this entity.

a. California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b. National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

c. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

d. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

e. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

Source: California Air Resources Board, May 2016, *Ambient Air Quality Standards*, https://ww2.arb.ca.gov/resources/documents/ambient-air-quality-standards-0, accessed October 27, 2022.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Applicant Energy Efficiency Standards
- Title 24, Part 6, CCR: Building Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

Tanner Air Toxics Act and Air Toxics "Hot Spot" Information and Assessment Act

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal CAA (42 US Code 7412[b]) is a TAC. Under State law, CalEPA, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform an HRA, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Idling Restrictions

Section 2449 of the CCR, Title 13, Article 4.8, Chapter 9, was adopted on May 2, 2008, and limits unessential idling of fleets to no more than five consecutive minutes at any location. This idling restriction applies to all vehicles in California with a diesel-fueled or alternative diesel-fueled off-road engine, unless a waiver provides sufficient justification that such idling is necessary. The airborne toxic control measure helps reduce public exposure to NO_x, DPM, and other criteria pollutant emissions from off-road diesel-fueled vehicles.

Regional Regulations

Bay Area Air Quality Management District

BAAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the SFBAAB. Air quality conditions in the SFBAAB have improved significantly since BAAQMD was created in 1955. BAAQMD prepares air quality management plans to attain AAQS in the SFBAAB. BAAQMD prepares ozone attainment plans for the national O_3 standard and clean air plans for the California O_3 standard. BAAQMD prepares these air quality management plans in coordination with Association of Bay Area Governments and the Metropolitan Transportation Commission to ensure consistent assumptions about regional growth.

Bay Area Air Quality Management District 2017 Clean Air Plan

BAAQMD adopted the 2017 "Clean Air Plan: Spare the Air, Cool the Climate" (2017 Clean Air Plan) on April 19, 2017, making it the most recently adopted comprehensive plan. The 2017 Clean Air Plan incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2017 Clean Air Plan serves as an update to the adopted Bay Area 2010 Clean Air Plan and continues to provide the framework for SFBAAB to achieve attainment of the California and National AAQS. The 2017 Clean Air Plan updates the Bay Area's ozone plan, which is based on the "all feasible measures" approach to meet the requirements of the California CAA. It sets a goal of reducing health risk impacts to local communities by 20 percent between 2015 and 2020 and lays the groundwork for reducing greenhouse gas (GHG) emissions in the Bay Area to meet the State's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A comprehensive multipollutant control strategy was developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, TACs, and GHG from a full range of emission sources. These control measures cover the following sectors: (1) stationary (industrial) sources, (2) transportation, (3) energy, (4) agriculture, (5) natural and working lands, (6) waste management, (7) water, (8) super-GHG pollutants, and (9) buildings. The proposed control strategy is based on the following key priorities:[5]

[5] Bay Area Air Quality Management District, April 2017, *Final 2017 Clean Air Plan, Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area*, https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en, accessed October 27, 2022.

- Reduce emissions of criteria air pollutants and TACs from all key sources.
- Reduce emissions of "super-GHGs," such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
  - Increase efficiency of the energy and transportation systems.
  - Reduce demand for vehicle travel and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors.

Community Air Risk Evaluation Program

The BAAQMD Community Air Risk Evaluation program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area, primarily DPM. The last update to this program was in 2014. Based on findings of the latest report, DPM was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light-duty trucks were also identified as significant contributors: 1,3-butadiene contributed 4 percent of the cancer risk-weighted emissions, and benzene contributed 3 percent. Collectively, five compounds—DPM; 1,3-butadiene; benzene; formaldehyde; and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). Overall, cancer risk from TACs dropped by more than 50 percent between 2005 and 2015 when emissions inputs accounted for State diesel regulations and other reductions.

The major contributor to acute and chronic noncancer health effects in the air basin is acrolein (C_3H_4O). Major sources of acrolein are on-road mobile sources and aircraft near freeways and commercial and military airports. Currently, CARB does not have certified emission factors or an analytical test method for acrolein. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, BAAQMD does not conduct health risk screening analysis for acrolein emissions.

Assembly Bill 617 Community Action Plans

AB 617 was signed into law in July 2017 to develop a new community-focused program to reduce exposure more effectively to air pollution and preserve public health in environmental justice communities. AB 617 directs CARB and all local air districts to take measures to protect communities disproportionally impacted by air pollution through monitoring and implementing air pollution control strategies.

On September 27, 2018, CARB approved BAAQMD's recommended communities for monitoring and emission reduction planning. The State approved communities for year one of the program as well as communities that would move forward over the next five years. Bay Area recommendations included all the Community Air Risk Evaluation areas, areas with large sources of air pollution (e.g., refineries,

seaports, airports), areas identified via statewide screening tools as having pollution and/or health burden vulnerability, and areas with low life expectancy.[6]

- Year One Communities:
  - *West Oakland.* The West Oakland community was selected for the BAAQMD's first Community Action Plan. In 2017, cancer risk from sources in West Oakland (local sources) was 204 in a million. The primary sources of air pollution in West Oakland include heavy trucks and cars, port and rail sources, large industries, and to a lesser extent other sources such as residential sources (i.e., wood burning). The majority (over 90 percent) of cancer risk is from DPM.[7]
  - *Richmond.* Richmond was selected for a community monitoring plan in year one of the AB 617 program. The Richmond area is in western Contra Costa County and includes most of the city of Richmond and portions of El Cerrito. It also includes communities just north and east of Richmond, such as San Pablo and several unincorporated communities, including North Richmond. The primary goals of the Richmond monitoring effort are to leverage historical and current monitoring studies, to better characterize the area's mix of sources, and to more fully understand the associated air quality and pollution impact.[8]
- Year Two to Five Communities: East Oakland/San Leandro, Eastern San Francisco, the Pittsburg-Bay Point area, San Jose, Tri-Valley, and Vallejo are slated for action in years two to five of the AB 617 program.[9]

Air District Rules and Regulations

Regulation 7, Odorous Substances

Sources of objectionable odors may occur within the city. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property." Under the BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

[6] Bay Area Air Quality Management District, April 16, 2019, *San Francisco Bay Area Community Health Protection Program*, https://www.baaqmd.gov/~/media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en, accessed October 27, 2022.

[7] Bay Area Air Quality Management District, October 2019, *West Oakland Community Action Plan*, https://www.baaqmd.gov/community-health/community-health-protection-program/west-oakland-community-action-plan, accessed October 27, 2022.

[8] Bay Area Air Quality Management District, April 16, 2019, *San Francisco Bay Area Community Health Protection Program*, https://www.baaqmd.gov/~/media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en, accessed October 27, 2022.

[9] Bay Area Air Quality Management District, April 16, 2019, *San Francisco Bay Area Community Health Protection Program*, https://www.baaqmd.gov/~/media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en, accessed October 27, 2022.

Other Air District Regulations

In addition to the plans and programs described above, BAAQMD administers a number of specific regulations on various sources of pollutant emissions that would apply to the proposed project:

- Regulation 2, Rule 2, Permits, New Source Review
- Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- Regulation 2, Rule 6, Permits, Major Facility Review
- Regulation 6, Rule 1, General Requirements
- Regulation 6, Rule 2, Commercial Cooking Equipment
- Regulation 8, Rule 3, Architectural Coatings
- Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing
- Regulation 11, Rule 18, Reduction of Risk from Air Toxic Emissions at Existing Facilities

Local Regulations

Oakland General Plan

Chapter 3, *Conservation*, of the Oakland General Plan Open Space, Conservation, and Recreation Element addresses conservation, development and use of Oakland's natural resources as well as air quality. In addition, the Housing Element also includes policies and guidelines relating to air quality. These are outlined in Table 4.2-3, *Oakland General Plan Policies Relevant to Air Quality and the Proposed Project*.

TABLE 4.2-3 OAKLAND GENERAL PLAN POLICIES RELEVANT TO AIR QUALITY AND THE PROPOSED PROJECT

Policy No.	Text
Open Space, Conservation, and Recreation Element	
CO-12.1	**Land Use Patterns Which Promote Air Quality.** Promote land use patterns and densities which help improve regional air quality conditions by: (a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as live-work development, mixed use development, and office development with ground floor retail space; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.
CO-12.6	**Control of Dust Emissions.** Require construction, demolition, and grading practices which minimize dust emissions.
Housing Element	
7.4	**Minimize Environmental Impacts from New Housing.** Work with developers to encourage construction of new housing that, where feasible, reduces the footprint of the building and landscaping, preserves green spaces, and supports ecological systems.

Source: City of Oakland, *City of Oakland General Plan*, *Open Space, Conservation, and Recreation Element* (June 1996) and *Housing Element* (December 2014).

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to air quality in Oakland. Chapter 8.60*, Prohibition on the Storing and Handling of Coal and Coke*, requires a citywide ban on the storage, loading, unloading, stockpiling, and handling of coal and coke throughout Oakland to promote the health, safety, and/or general welfare of its citizens by eliminating any risk of release into the environment. Largely because Section 8.60.020, *Findings*, determines that coal and coke release fugitive dust as PM_{10} and $PM_{2.5}$, toxic and nontoxic, which negatively affects air quality and the health of persons who are exposed to such particulate matter. Section 18.19.010, *Wood burning appliances*, establishes the requirements for all wood-burning appliances installed in new residential and commercial units to reduce the health risks from airborne particulates and other pollutants deriving from the products of combustion of wood and similar cellulose and lignin-based substances.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCAs are related to air quality and are applicable to the proposed project:

- SCA-20. Dust Controls – Construction Related: The project applicant shall implement all of the following applicable dust control measures during construction of the project:
  a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.
  b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
  c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
  d) Limit vehicle speeds on unpaved roads to 15 miles per hour.
  e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.
  f) All trucks and equipment, including tires, shall be washed off prior to leaving the site.
  g) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
  h) Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
  i) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.
  j) When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity.

k) Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours.
l) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

- SCA-21. Criteria Air Pollutant Controls - Construction Related: The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable:
  a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.
  b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations").
  c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed.
  d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand.
  e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings.
  f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.
  g) Criteria Air Pollutant Reduction Measures: The project applicant shall retain a qualified air quality consultant to identify criteria air pollutant reduction measures to reduce the project's average daily emissions below 54 pounds per day of ROG, NOx, or $PM_{2.5}$ or 82 pounds per day of PM_{10}. Quantified emissions and identified reduction measures shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits and the approved criteria air pollutant reduction measures shall be implemented during construction.
  h) Construction Emissions Minimization Plan: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified criteria air pollutant reduction measures. The Emissions Plan shall be submitted to the City (and the Air District if specifically

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

i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all Verified Diesel Emissions Control Strategies (VDECS), the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.
ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.

4.2.1.3 EXISTING CONDITIONS

San Francisco Bay Area Air Basin Conditions

California is divided geographically into air basins for the purpose of managing the air resources of the state on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. California is divided into 15 air basins. The city of Oakland is in the SFBAAB. This discussion identifies the natural factors in SFBAAB that affect air pollution. Air pollutants of concern are criteria air pollutants and TACs. Federal, State, and local air districts have adopted laws and regulations intended to control and improve air quality.

BAAQMD is the regional air quality agency for the SFBAAB, which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.[10]

Meteorology

The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range[11] splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allow air to flow in and out of the Bay Area and the Central Valley. The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold-water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California

[10] This section describing the Air Basin is from Bay Area Air Quality Management District, 2010 (Revised 2011), Appendix C, *Sample Air Quality Setting*, in *California Environmental Quality Act Air Quality Guidelines*.

[11] The Coast Range traverses California's west coast from Humboldt County to Santa Barbara County.

coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.

Wind Patterns

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San José when it meets the East Bay hills. Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap.

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon and the sea breeze deepens and increases in velocity while spreading inland. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. In the winter, the SFBAAB frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing, which occurs when there is a lack of or little wind) are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the SFBAAB.

Temperature

Summertime temperatures in the Air Basin are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold water from the ocean bottom along the coast. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit (°F) cooler than temperatures 15 to 20 miles inland; at night, this contrast usually decreases to less than 10°F. In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime, the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large. The average low is reported at 42.5°F in January while the average high is 79.8°F in August.[12]

Precipitation

The Air Basin is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual

[12] USA.Com, 2022, Oakland City, California: Historical Weather Report, http://www.usa.com/oakland-ca-weather.htm, accessed October 27, 2022.

precipitation can vary greatly from one part of the Air Basin to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys.

During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants are dispersed more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up. Rainfall averages 22.97 inches per year in the project site area.[13]

Wind Circulation

Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants up-valley during the day, and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthy levels.

Inversions

An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly in the SFBAAB. Elevation inversions[14] are more common in the summer and fall, and radiation inversions[15] are more common during the winter. The highest air pollutant concentrations in the SFBAAB generally occur during inversions.

Attainment Status of the SFBAAB

The air quality management plan provides the framework for air quality basins to achieve attainment of the State and National AAQS through the State Implementation Plan. Areas that meet AAQS are classified as attainment areas, and areas that do not meet these standards are classified as nonattainment areas. Severity classifications for O_3 range from marginal, moderate, and serious to severe and extreme.

[13] USA.Com, 2022, Oakland City, California: Historical Weather Report, http://www.usa.com/oakland-ca-weather.htm, accessed October 27, 2022.

[14] When the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley.

[15] During the night, the ground cools off, radiating the heat to the sky.

- Unclassified: A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- Attainment: A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- Nonattainment: A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- Nonattainment/Transitional: A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SFBAAB is shown in Table 4.2-4, *Attainment Status of Criteria Pollutants in the San Francisco Bay Area Air Basin*. The SFBAAB is currently designated as a nonattainment area for California and National O_3, California and National $PM_{2.5}$, and California PM_{10} AAQS.

TABLE 4.2-4 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	Classification revoked (2005)
Ozone – 8-hour	Nonattainment (serious)	Nonattainment (marginal) [a]
PM_{10}	Nonattainment	Unclassified/Attainment [b]
$PM_{2.5}$	Nonattainment	Unclassified/Attainment
CO	Attainment	Attainment
NO_2	Attainment	Unclassified
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

a. Severity classification current as of February 13, 2017.
b. In December 2014, USEPA issued final area designations for the 2012 primary annual $PM_{2.5}$ National AAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.
Source: California Air Resources Board, 2022, Maps of State and Federal Area Designations, https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations, accessed October 27, 2022.

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project area have been documented and measured by BAAQMD. BAAQMD has 24 permanent monitoring stations around the Bay Area. The nearest station is the Oakland-9925 International Blvd Monitoring Station, which monitors O_3, NO_2, and $PM_{2.5}$. Data from this monitoring station is summarized in Table 4.2-5, *Ambient Air Quality Monitoring Summary*. The data show regular violations of the State and federal O_3 standards and federal $PM_{2.5}$ standard.

TABLE 4.2-5 AMBIENT AIR QUALITY MONITORING SUMMARY

	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations				
Pollutant/Standard	2017	2018	2019	2020	2021
Ozone (O_3)					
State 1-Hour ≥ 0.09 ppm	1	0	1	0	0
State & Federal 8-hour ≥ 0.07 ppm	2	0	2	0	0
Maximum 1-Hour Conc. (ppm)	0.136	0.061	0.098	0.090	0.083
Maximum 8-Hour Conc. (ppm)	0.100	0.052	0.073	0.066	0.061
Nitrogen Dioxide (NO_2)					
State 1-Hour ≥ 0.18 (ppm)	0	0	0	0	0
Maximum 1-Hour Conc. (ppb)	0.0649	0.0729	0.0618	0.0592	0.0487
Fine Particulates ($PM_{2.5}$)					
Federal 24-Hour > 35 µg/m^3	7	13	0	11	0
Maximum 24-Hour Conc. (µg/m^3)	70.2	172.1	24.7	167.7	33.0

Notes: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; * = insufficient data; NA = Not Available
Data for O_3, NO_2, and $PM_{2.5}$ was obtained from the Oakland-9925 International Monitoring Station.
Source: California Air Resources Board, 2022, Air Pollution Data Monitoring Cards (2016, 2017, 2018, 2019, and 2020), https://www.arb.ca.gov/adam/topfour/topfourdisplay.php, accessed October 7, 2022.

Existing Emissions

The project site is an undeveloped strip of land on a steeply sloped topography with existing residential land uses to the east and west of the project site. Existing uses currently do not generate any criteria air pollutant emissions from natural gas use for energy, heating and cooking, vehicle trips, and area sources such as landscaping equipment and consumer cleaning products.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent since the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the population. Sensitive receptors to the proposed project include the single-family residences to the east and west of the project site and Merritt Community College to the northwest along Margie Lane.

4.2.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant air quality impact if it would:

1. During project construction result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$ or 82 pounds per day of PM_{10}.
2. During project operation result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NO_X, or $PM_{2.5}$ or 15 tons per year of PM_{10}.
3. Contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour. *[NOTE: Pursuant to BAAQMD CEQA Guidelines, localized CO concentrations should be estimated for projects in which (a) project-generated traffic would conflict with an applicable congestion management program established by the county congestion management agency or (b) project-generated traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited, such as tunnels, parking garages, bridge underpasses, natural or urban street canyons, and below-grade roadways). In Oakland, only the MacArthur Maze portion of Interstate 580 exceeds the 44,000 vehicles per hour screening criteria]*
4. 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 non-cancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 micrograms per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter. *[NOTE: Pursuant to the BAAQMD CEQA Guidelines, when siting new TAC sources consider receptors located within 1,000 feet. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers. The cumulative analysis should consider the combined risk from all TAC sources]*
5. Expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter. *[NOTE: Pursuant to the BAAQMD CEQA Guidelines, when siting new sensitive receptors consider TAC sources located within 1,000 feet including, but not limited to, stationary sources, freeways, major roadways (10,000 or greater vehicles per day), truck distribution centers, airports, seaports, ferry terminals, and rail lines. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers]*
6. Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people. *[NOTE: For this threshold, sensitive*

receptors include residential uses, schools, daycare centers, nursing homes, and medical centers (but not parks)]

7. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to air quality.

4.2.3 IMPACT DISCUSSION

Methodology

BAAQMD has published the *CEQA Air Quality Guidelines* that provides local governments with guidance for analyzing and mitigating air quality impacts and was used in this analysis. The BAAQMD *CEQA Air Quality Guidelines* provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, greenhouse gas emissions, and environmental justice. Please note that impacts related to greenhouse gas emissions are discussed in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR.

Since publication of the Notice of Preparation (June 9, 2020), BAAQMD released its Justification Report in April 2022 and a new version of the BAAQMD *CEQA Air Quality Guidelines* in April 2023.[16] This included an update to enhance best management practices for construction-related fugitive dust, among other updates to thresholds of significance and climate impacts. However, the BAAQMD *CEQA Air Quality Guidelines* that were in place at the time of publication of the Notice of Preparation (June 9, 2020) were utilized for this air quality evaluation.

Regional Emissions Modeling

Criteria air pollutant emissions modeling is included in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR. The proposed project criteria air pollutant emissions inventory was modeled using the California Emissions Estimator Model (CalEEMod) Version 2022.1. and includes the following sectors:

- Construction. Modeling is based on the 14-month construction schedule provided by the applicant. The construction equipment mix, construction worker, and vendor trips were based on CalEEMod defaults.

Localized Emissions Modeling

A construction HRA from TACs and $PM_{2.5}$ associated with construction equipment exhaust was prepared for the proposed project and is included in Appendix C, *Construction Health Risk Assessment*, of this Draft EIR. Sources evaluated in the HRA include off-road construction equipment and heavy-duty diesel trucks

[16] Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed June 21, 2023.

along the truck route. Modeling is based on the USEPA's AERMOD air dispersion modeling program and the latest HRA guidance from the Office of Environmental Health Hazard Assessment (OEHHA) to estimate excess lifetime cancer risks, chronic non-cancer hazard indices, and the $PM_{2.5}$ maximum annual concentrations at the nearest maximum exposed off-site sensitive receptors (residences and students at Merritt College) and assumes 24-hour outdoor exposure with risks averaged over a 70-year lifetime.

DPM emissions were based on the CalEEMod construction runs, using annual exhaust PM_{10} construction emissions presented in pounds (lbs) per day. The $PM_{2.5}$ emissions were taken from the CalEEMod output for exhaust $PM_{2.5}$, also presented in lbs per day. The proposed project was assumed to take place over approximately 14 months (290 workdays) from the beginning of January 2024 to March 2025. The average daily emission rates from construction equipment used during the proposed project were determined by dividing the annual average emissions for each construction year by the number of construction days per year for each calendar year of construction (i.e., 2024 through 2025).

Air dispersion modeling using the USEPA's AERMOD program was conducted to assess the impact of emitted compounds on sensitive receptors. The model is a steady-state Gaussian plume model and is an approved model by BAAQMD for estimating ground-level impacts from point and fugitive sources in simple and complex terrain. Meteorological data obtained from CARB for the nearest representative meteorological station (Oakland International Airport) with the five latest available years (2013 to 2017) of record were used to represent local weather conditions and prevailing winds. The health risks are calculated using the average daily construction emission rates and the AERMOD output at the maximum exposed individual resident (MEIR) and maximum exposed school receptor at Merritt College.

AIR-1 **The proposed project construction would not result in average daily emissions of 54 pounds per day of ROG, NOx, or $PM_{2.5}$ or 82 pounds per day of PM_{10}.**

The City has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including ROG, NO, PM_{10}, and $PM_{2.5}$, which are based on the BAAQMD CEQA Guidelines. Development projects below these significance thresholds (listed in Section 4.2.2, *Standards of Significance*) are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Construction Emissions

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM_{10} and $PM_{2.5}$) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities on-site would vary daily as construction activity levels change. Construction activities associated with the proposed project would result in emissions of ROG, NOx, CO, PM_{10}, and $PM_{2.5}$. An estimate of construction emissions associated with the proposed project is shown in Table 4.2-6*, Construction-Related Criteria Air Pollutant Emissions Estimate.*

TABLE 4.2-6 CONSTRUCTION-RELATED CRITERIA AIR POLLUTANT EMISSIONS ESTIMATE

	Average Daily Criteria Air Pollutants (lbs/day) [a]					
	VOC	NO_x	Exhaust PM_{10}	Fugitive PM_{10} [b]	Exhaust $PM_{2.5}$	Fugitive $PM_{2.5}$ [b]
Average Daily Construction Emissions [c]	2	10	<1	1	<1	<1
City's Average Daily Project-Level Threshold	54	54	Implement BMPs	82	Implement BMPs	54
Exceeds Average Daily Threshold	No	No	NA	No	NA	No

Notes: Emissions may not total to 100 percent due to rounding. lbs/day = pounds per day; BMP = Best Management Practices; Volatile Organic Compounds = VOC; Nitrogen Oxides = NO_x, Coarse Inhalable Particulate Matter = $PM_{10;}$ Fine Inhalable Particulate Matter = $PM_{2.5}$
a. Construction phasing and equipment is based on the preliminary information provided by the project applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District of construction equipment and phasing for comparable projects.
b. Includes implementation of BMPs for fugitive dust control required by BAAQMD, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and street sweeping.
c. Average daily emissions are based on the construction emissions divided by the total number of active construction days. The total number of construction days is estimated to be 290 days.
Source: CalEEMod 2022.1. Table 2.1 Emissions Summary.

Construction Exhaust Emissions

Construction emissions are based on the preliminary construction schedule developed by the project applicant. Activities that would take place include site preparation, grading, building construction, utility trenching, paving, architectural coating, and finishing/landscaping. To determine potential construction-related air quality impacts, criteria air pollutants generated by project-related construction activities are compared to the City's significance thresholds. Average daily emissions are based on the total annual construction emissions divided by the total number of active construction days. As shown in Table 4.2-6, criteria air pollutant emissions from construction equipment exhaust would not exceed the City's average daily thresholds. Additionally, the proposed project would be required to implement SCA-21, *Criteria Air Pollutant Controls - Construction Related*, to reduce construction-related exhaust emissions. Therefore, construction-related criteria pollutant emissions from exhaust would be *less than significant*.

Fugitive Dust

Ground-disturbing activities during project construction could generate fugitive dust (PM_{10} and $PM_{2.5}$) that, if left uncontrolled, could expose the areas downwind of the construction site to air pollution from the construction dust. Fugitive PM_{10} is typically the most significant source of air pollution from the dust generated from construction. The amount of fugitive dust generated during construction would be highly variable and is dependent on the amount of material being demolished, the type of material, moisture content, and meteorological conditions. PM_{10} bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. $PM_{2.5}$ penetrates even more deeply into the lungs, and this is more likely to contribute to health effects—at concentrations well below current PM_{10} standards. Health effects include premature death in people with heart or lung disease, nonfatal heart

attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing).

As described in Section 4.2.2, *Standards of Significance*, the City does not provide a quantitative threshold for construction-related fugitive dust emissions, and a project's fugitive dust emissions are considered acceptable with implementation of BAAQMD's best management practices. In other words, there could be a significant impact if the best management practices are not enforced. For this reason, the proposed project's fugitive dust emissions, with the incorporation of BAAQMD's best management practices, are quantified for reference in Table 4.2-6.

The proposed project would be required to comply with SCA-20, *Dust Controls – Construction Related*, to ensure implementation of BAAQMD's best management practices. With adherence to SCA-20, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

AIR-2	**The operation of the proposed project would not result in average daily emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10} or result in maximum annual emissions of 10 tons per year of ROG, NOx, or $PM_{2.5}$ or 15 tons per year of PM_{10}.**

Operational Emissions

Typical long-term air pollutant emissions are generated by area sources (e.g., landscape fuel use, aerosols, architectural coatings, and asphalt pavement), energy use (natural gas), and mobile sources (i.e., on-road vehicles). BAAQMD provides a screening criteria for operational-related criteria air pollutants.[17] Since the number of proposed new homes would be substantially less than the operational criteria pollutant screening number of 325 dwelling units, the operational emissions generated by the proposed project would not exceed BAAQMD's criteria and the City of Oakland's 2020 CEQA Thresholds of Significance Guidelines.[18] Therefore, the proposed project would not cumulatively contribute to the nonattainment designations of the SFBAAB and project-related operation activities to the regional air quality would be *less than significant*.

Significance without Mitigation: Less than significant.

[17] Bay Area Air Quality Management District, May 2017, *California Environmental Quality Act Air Quality Guidelines,* https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed October 27, 2022.

[18] Further details are shown in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

AIR-3	**The proposed project would not contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour.**

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO, called hotspots. These pockets have the potential to exceed the State 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. Because CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for periods of time and are subject to reduced speeds.

Congestion management plans must align with *Plan Bay Area 2050*, and an overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle miles traveled, also known as VMT, and associated GHG emissions reductions under Senate Bill 375. The proposed project would cause a slight increase in residential density in the existing area but would be consistent with the overall goals of the Association of Bay Area Governments' and the Metropolitan Transportation Commission's *Plan Bay Area 2050*. Additionally, the proposed project would not conflict with a congestion management plan because it would not hinder the capital improvements outlined in Alameda County's 2021 Congestion Management Program or alter regional travel patterns.[19]

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—to generate a significant CO impact.[20] Based on the traffic analysis conducted as part of this environmental analysis, the proposed project would generate 7 peak hour trips during the morning (AM) peak hour and 10 peak hour trips during the evening (PM) peak hour and would not increase traffic volumes at affected intersections by more than BAAQMD's screening criteria of 44,000 vehicles per hour, or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited.[21] Therefore, the proposed project would not have the potential to substantially increase CO hotspots at intersections in the project vicinity, and localized CO concentrations would not exceed the CAAQS of 9 ppm averaged over eight hours and 20 ppm for one hour. Localized air quality impacts related to mobile-source emissions would therefore be *less than significant*.

[19] Alameda County Transportation Commission, 2021, *2021 Congestion Management Program*, https://www.alamedactc.org/wp-content/uploads/2021/12/2021_CMP_Update_FINAL.pdf, accessed October 27, 2022.

[20] Bay Area Air Quality Management District, May 2017, *California Environmental Quality Act Air Quality Guidelines,* https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed October 27, 2022.

[21] W-Trans, November 29, 2021, *Draft Viewcrest Estates Residential Development CEQA Evaluation*. See Appendix I, *Transportation Impact Analysis*.

Significance without Mitigation: Less than significant.

AIR-4	**The proposed project would not, 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 non-cancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 micrograms per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.**

The proposed project could expose sensitive receptors to elevated pollutant concentrations if it would cause or contribute significantly to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass, so they can be more readily correlated to potential health effects.

Construction

The proposed project would elevate concentrations of TACs and construction exhaust $PM_{2.5}$ in the vicinity of sensitive land uses (i.e., sensitive receptors) during construction activities. The nearest off-site sensitive receptors to the project site include the single-family residences to the east and west of the project site and Merritt Community College to the northwest. Construction activities would occur near these sensitive receptor locations. Consequently, an HRA of TACs and construction exhaust $PM_{2.5}$ was prepared for the proposed project and is included in Appendix C, *Health Risk Assessment*, of this Draft EIR.

Results of the analysis are shown in Table 4.2-7, *Construction Health Risk Assessment Results – Unmitigated*.

TABLE 4.2-7 CONSTRUCTION HEALTH RISK ASSESSMENT RESULTS – UNMITIGATED

	Project Level Risk [a, b]		
Receptor	Cancer Risk (per million)	Chronic Hazards	Construction Exhaust $PM_{2.5}$ ($\mu g/m^3$) [a]
Maximum Exposed Individual Resident (MEIR)	9.4	0.020	0.12
Maximum Exposed School Receptor (Merritt College Student)	0.0	0.001	0.01
Threshold	10	1.0	0.3 $\mu g/m^3$
Exceeds Threshold?	No	No	No

Notes: Cancer risk calculated using the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Health Risk Assessment guidance.
a. Construction phasing are based on the preliminary information provided by the Applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District of construction equipment and phasing for comparable projects.
b. Average daily emissions are based on the total construction emissions divided by the total number of active construction days. The total number of construction days is estimated to be 290 workdays. Includes implementation of BMPs for fugitive dust control required by BAAQMD as mitigation, including watering disturbed areas a minimum of 2 times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and street sweeping.
Source: PlaceWorks, 2022.

The results of the HRA are based on the maximum exposed receptor concentration over the approximately 1.1-year construction exposure period for off-site receptors, assuming 24-hour outdoor exposure, and averaged over a 70-year lifetime. Risk is based on the updated OEHHA Guidance, as follows:

- Cancer risk for the MEIR, which would be the single-family residence east of the site, from unmitigated construction activities related to the proposed project were calculated to be 9.4 in a million and would not exceed the 10-in-a-million significance threshold. In accordance with the latest, 2015 OEHHA guidance, the calculated total cancer risk conservatively assumes that the risk for the MEIR consists of a pregnant woman in the third trimester that subsequently gives birth to an infant during the approximately 1.1-year construction period; therefore, calculated risk values for the first 1.1 years of construction were multiplied by a factor of 10 and the remaining duration by a factor of 3.
- The incremental cancer risks for the maximum exposed school receptor at Merritt College were calculated to be less than the 10-in-a-million significance threshold.
- For noncarcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than 1 for both the MEIR and maximum exposed school receptors from the proposed project's construction. Therefore, chronic noncarcinogenic hazards do not exceed City's thresholds.
- The highest $PM_{2.5}$ annual concentrations at the MEIR and maximum exposed school receptor were calculated below the 0.3 $\mu g/m^3$ significance threshold.

The proposed project would be required to comply with SCA-20, *Dust Controls – Construction Related*, to ensure implementation of BAAQMD's best management practices and SCA-21, *Criteria Air Pollutant Controls - Construction Related*, to reduce construction-related exhaust emissions.

Therefore, with adherence to Oakland SCAs, cancer risk and $PM_{2.5}$ concentrations at the MEIR would be *less than significant*, and the proposed project would not expose sensitive receptors to substantial concentrations of air pollutant emissions during construction.

Operation

Exposure to elevated concentrations of vehicle-generated $PM_{2.5}$ and TACs at sensitive land uses have been identified by CARB, the California Air Pollution Control Officer's Association, and the City as a potential air quality hazard. The proposed project would not create new major sources of TACs, which are more commonly associated with industrial manufacturing or warehousing. Therefore, operation-related health risk impacts associated with the proposed project are considered *less than significant*.

Significance without Mitigation: Less than significant.

AIR-5	**The proposed project would not expose new sensitive receptors to substantial ambient levels of toxic air contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.**

Cumulative Construction

BAAQMD recommends assessing the potential cumulative impacts from sources of TACs within 1,000 feet of the project to address the project's cumulative contribution to localized TACs and $PM_{2.5}$. Based on BAAQMD's Stationary Source Screening Map, there are no major stationary sources or off-site mobile sources of emissions (e.g., maritime, rail, high-volume roadways) within 1,000 feet of the project site.[22] The proposed project would be required to adhere to SCA-20, *Dust Controls – Construction Related*, to ensure implementation of BAAQMD's best management practices, as well as SCA-21, *Criteria Air Pollutant Controls - Construction Related*, to reduce construction-related exhaust emissions.

Therefore, the cumulative health risk would be less than the BAAQMD threshold of 100 in a million for a lifetime cancer risk and less than the noncarcinogenic chronic or acute hazard index of 10.0. Additionally, the $PM_{2.5}$ concentrations for all emission sources would be below the cumulative BAAQMD significance threshold of 0.8 $\mu g/m^3$. The cumulative risks to off-site receptors from the proposed project's construction and existing emission sources would not expose off-site or new sensitive receptors to substantial concentrations of air pollutant emissions, and health risk impacts would be *less than significant.*

Operation

Exposure to elevated concentrations of vehicle-generated $PM_{2.5}$ and TACs at sensitive land uses have been identified by CARB, the California Air Pollution Control Officer's Association, and the City as a potential air quality hazard. The proposed project would not create new major sources of TACs, which are more

[22] Bay Area Air Quality Management District, updated April 2022, Stationary Source Screening Map, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3, accessed October 27, 2022.

commonly associated with industrial manufacturing or warehousing. Therefore, operation-related health risk impacts associated with the proposed project are considered *less than significant*.

Significance without Mitigation: Less than significant.

AIR-6	**The proposed project would not frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people.**

The proposed project would accommodate additional residential growth in the existing neighborhood but would not generate substantial odors that would affect a substantial number of people. The type of facilities that are typically considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Residential uses are not associated with foul odors that constitute a public nuisance.

During project-related construction activities on the project site, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

AIR-7	**The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to air quality.**

Criteria Air Pollutants

Impact Discussions AIR-1 and AIR-2 analyzed potential cumulative impacts to air quality that could occur from construction and operation of the proposed project, respectively, in combination with regional growth projections in the air basin. Adherence to the Oakland SCAs would reduce impacts from fugitive dust generated during construction activities. Additionally, regional emissions would not exceed the City's regional significance thresholds (see Impact Discussion AIR-1). Consequently, the proposed project would not cumulatively contribute to the nonattainment designations of the SFBAAB, and impacts would be *less than significant*.

Toxic Air Contaminants and $PM_{2.5}$

The proposed project's cumulative contribution to TAC and $PM_{2.5}$ concentrations in the SFBAAB are discussed under Impact Discussion AIR-5. As shown in Table 4.2-7, unmitigated health risks would be

below the City's thresholds for individual projects and, therefore, the cumulative health risks from the proposed project would be further reduced below the City's cumulative thresholds of 100 in a million for a lifetime cancer risk, a non-cancer risk (chronic or acute) hazard index greater than 10.0 for chronic hazards, and the $PM_{2.5}$ concentration for all emission sources of 0.8 µg/m^3. Consequently, cumulative localized impacts from TACs and $PM_{2.5}$ would be *less than significant*.

Significance without Mitigation: Less than significant.

4.3 BIOLOGICAL RESOURCES

This chapter includes an evaluation of the potential environmental consequences on biological resources from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing biological resources in the vicinity of the proposed project, and identifies mitigation measures that would avoid or reduce significant impacts.

Available background information used for this assessment included records on occurrences of special-status species and sensitive natural communities maintained by the California Natural Diversity Database (CNDDB) of the California Department of Fish and Wildlife (CDFW), designated critical habitat mapped by the United States Fish and Wildlife Service (USFWS), wetlands mapped as part of the National Wetlands Inventory maintained by the USFWS, and the electronic inventory of rare and endangered plants maintained by the California Native Plant Society (CNPS). CNDDB query results are included in Appendix D, *Biological Resources Data*, of this Draft Environmental Impact Report (EIR).

This chapter was prepared by the EIR biologist from Environmental Collaborative and is based in part on the *Preliminary Arborist Report*, prepared by HortScience Inc. and revised October 2022. See Appendix E, *Arborist Report*, of this Draft EIR.

The Preliminary Arborist Report (PAR) provided information on trees exceeding four inches in trunk diameter within the anticipated development area of the proposed project, including recommendations for removal and preservation of evaluated trees.

An initial survey of the project site was conducted by the EIR biologist on April 28, 2020. The initial field survey effort was performed to determine existing conditions and potential for presence of sensitive biological resources. This was followed by a second survey with the EIR biologist and botanist on May 6, 2020, to confirm field conditions and initiate systematic surveys for special-status plant species in the proposed development area of the project site. Subsequent surveys for special-status plants were conducted on May 31 and August 18, 2020, and on March 31, 2021, to complete the systematic surveys for special-status plants in accordance with CDFW guidelines.[1] During the surveys, all plant species encountered within the proposed development area were identified to the degree necessary to determine rarity, and all species encountered were listed. This list of all plant species observed during the systematic plant surveys is in Appendix D, *Biological Resources Data*, of this Draft EIR.

[1] California Natural Resources Agency, California Department of Fish and Wildlife, revised February 3, 2021, *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities,* https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959, accessed November 4, 2022.

4.3.1 ENVIRONMENTAL SETTING

4.3.1.1 REGULATORY FRAMEWORK

Federal Regulations

Federal Endangered Species Act

The USFWS and National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) is responsible for implementation of the federal Endangered Species Act (FESA) (16 US Code Section 1531 et seq.). FESA protects fish and wildlife species that are listed as threatened or endangered and their habitats. "Endangered" species, subspecies, or distinct population segments are those that are in danger of extinction through all or a significant portion of their range, and "threatened" species, subspecies, or distinct population segments are likely to become endangered in the near future.

If a listed species or its habitat is found to be affected by a project, then according to Section 7 of the FESA, all federal agencies are required to consult with USFWS and NOAA Fisheries when a federal nexus exists. The purpose of consultation with USFWS and NOAA Fisheries is to ensure that the federal agencies' actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species. A Section 10(a) Incidental Take Permit applies to situations where a nonfederal government entity must resolve potential adverse impacts to species protected under FESA, which typically requires preparation of an agency-approved habitat conservation plan to allow for the anticipated take.

Section 9 of the FESA prohibits the take of any fish or wildlife species listed as endangered, including the destruction of habitat that prevents the species' recovery. "Take" is defined as an action or attempt to hunt, harm, harass, pursue, shoot, wound, capture, kill, trap, or collect a species. Section 9 prohibitions also apply to threatened species unless a special rule has been defined with regard to taking at the time of listing. Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the unlawful removal and reduction to possession, or malicious damage or destruction, of any endangered plant from federal land. Section 9 prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in nonfederal areas in knowing violation of any State law or in the course of criminal trespass. Section 9 does not provide any protection for candidate species and species that are proposed or under petition for listing.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 US Code 703 et seq.) governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. Moreover, the MBTA prohibits the take, possession, import, exports, transport, selling, purchase, or barter—or offering for sale, purchase, or barter—of any migratory bird, their eggs, parts, or nests, except as authorized under a valid permit.[2]

[2] Code of Federal Regulations Title 50 Section 21.11.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (US Code Section 668 et seq.) protects the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*). The act prohibits anyone from "taking" bald or golden eagles without a permit issued by the Secretary of the Interior. Taking includes their parts, nest, or eggs; molesting; or disturbing the birds. The act provides criminal penalties for any persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part (including feathers), nest, or egg thereof."

Federal Clean Water Act

The United States Army Corps of Engineers (USACE) regulates discharges of dredged or fill material into "waters of the United States,"[3] including wetlands and non-wetland bodies of water that meet specific criteria. Pursuant to Section 404 of the federal Clean Water Act (CWA), a permit is required for any filling or dredging within waters of the United States. The permit review process entails an assessment of potential adverse impacts to USACE wetlands and jurisdictional waters, wherein the USACE may require mitigation measures. Where a federally listed species may be affected, a Section 7 consultation with the USFWS may be required in instances where a federal nexus exists, such as a potential impact on regulated waters. Where a Section 404 permit is required, a Section 401 Water Quality Certification is also required from the Regional Water Quality Control Board (RWQCB).

Section 401(a)(1) of the CWA specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal permitting agency with certification, issued by the state in which the discharge originates, that any such discharge will comply with the applicable provisions of the CWA. In California, the applicable RWQCB must certify that the project will comply with water quality standards. Permits requiring Section 401 certification include USACE Section 404 permits and National Pollutant Discharge Elimination System permits issued by the Environmental Protection Agency under Section 402 of the CWA. National Pollutant Discharge Elimination System permits are issued by the applicable RWQCB; the City of Oakland is within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

[3] "Waters of the United States," as it applies to the jurisdictional limits of the authority of the USACE under the CWA, includes: all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce; water impoundments; tributaries of waters; territorial seas; and wetlands adjacent to waters. The terminology used by Section 404 of the CWA includes "navigable waters," which is defined at Section 502(7) of the CWA as "waters of the United States including the territorial seas."

State Regulations

California Fish and Game Code

Section 1600 of the California Fish and Game Code requires that a project proponent notify CDFW of any proposed alteration of streambeds, rivers, and lakes. The intent is to protect habitats that are important to fish and wildlife. The CDFW may review a project and place conditions on the project as part of a Streambed Alteration Agreement. The conditions are intended to address potentially significant adverse impacts within the CDFW's jurisdictional limits.

California Fish and Game Code Section 3503.5 prohibits take, possession, or destruction of any raptor (bird of prey species in the orders Falconiformes and Strigiformes), including their nests or eggs. Violations of this law include destruction of active raptor nests as a result of tree removal and disturbance to nesting pairs by nearby human activity that causes nest abandonment and reproductive failure.

In addition, the Native Plant Protection Act of 1977 prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered in the California Fish and Game Code Section 1900, et seq. Under specific circumstances, an exception to this prohibition allows landowners to take listed plant species when the owners first notify the CDFW and allot the agency at least 10 days to retrieve the plants before they are otherwise destroyed. Project impacts to these species are not considered significant unless the species are known to have a high potential of occurring within the proposed development area.

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA and is administered by the CDFW. Its intent is to prohibit take and protect State-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, the CESA also applies the take prohibitions to species petitioned for listing (State candidates). Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, the CESA does not include listing provisions for invertebrate species. Under certain conditions, the CESA has provisions for take through a 2081 permit or Memorandum of Understanding. In addition, some sensitive mammals and birds are protected by the State as Fully Protected Species. California Species of Special Concern (SSCs) are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's CNDDB, a database of known and recorded occurrences of sensitive species. Informally listed taxa are not protected per se but warrant consideration in the preparation of biological resources assessments.

California Porter-Cologne Water Quality Control Act

The RWQCB has regulatory authority over wetlands and waterways under both the CWA and the State of California's Porter-Cologne Water Quality Control Act (California Water Code, Division 7). Under the CWA, the RWQCB has regulatory authority over actions in waters of the U.S., through the issuance of water quality certifications under Section 401 of the CWA in conjunction with permits issued by the USACE

under Section 404 of the CWA. When the RWQCB issues Section 401 certifications, it simultaneously issues general Waste Discharge Requirements for the project under the Porter-Cologne Water Quality Control Act. Activities in areas that are outside of the jurisdiction of the USACE (e.g., isolated wetlands, vernal pools, seasonal streams, intermittent streams, channels that lack a nexus to navigable waters, or stream banks above the ordinary high water mark) are regulated by the RWQCB under the authority of the Porter-Cologne Water Quality Control Act. Activities that lie outside of USACE's jurisdiction may require the issuance of either individual or general waste discharge requirements.

Other Statutes, Codes, and Policies Affording Species Protection

The CDFW maintains an administrative list of California SSCs, defined as a "species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the state, or, in the case of birds, in its primary seasonal or breeding role;
- Is listed as federally, but not State threatened or endangered;
- Meets the State definition of threatened or endangered but has not formally been listed;
- Is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines that would qualify it for State threatened or endangered status."

The CDFW's Nongame Wildlife Program is responsible for producing and updating SSC publications for mammals, birds, and reptiles and amphibians. Section 15380, *Endangered, Rare or Threatened Species*, of the California Environmental Quality Act (CEQA) Guidelines clearly indicates that SSCs should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein. In contrast to species listed under FESA or CESA, however, SSCs have no formal legal status.

The CNPS is a nonprofit conservation organization dedicated to the preservation of native flora in California. The CNPS has been involved in assembling, evaluating, and distributing information on special-status plant species in the state, as listed in the Inventory of Rare and Endangered Plants of California. CNPS has recently updated its rating system for the rarity of special-status plants and now includes both a California Rare Plant Rank and a Threat Rank. CEQA requires government agencies to consider environmental impacts of discretionary projects and to avoid or mitigate them where possible. Under Section 15380, the CEQA Guidelines provides protection for both State-listed species and for any other species that can be shown to meet the criteria for State listing. The CDFW recognizes that special-status plants with a California Rare Plant Rank of 1A (presumed extinct in California), 1B (rare, threatened, or endangered in California and elsewhere), and 2 (rare and endangered in California, but more common elsewhere) in the CNPS Inventory consist of plants that, in a majority of cases, would qualify for listing, and these species should be addressed under CEQA review. In addition, the CDFW recommends, and local governments may require, protection of species that are regionally significant, such as locally rare species, disjunct populations, essential nesting and roosting habitat for more common wildlife species, or plants

with a CNPS California Rare Plant Rank of 3 (plant species for which additional data is needed, a review list) and 4 (plant species of limited distribution, a watch list).

Local Regulations

Oakland General Plan

Chapter 3, *Conservation*, of the Oakland General Plan Open Space, Conservation, and Recreation Element addresses conservation, development, and use of Oakland's natural resources, as well as biological resources. Policies applicable to the proposed project related to biological resources are outlined in Table 4.3-1, *Oakland General Plan Policies Relevant to Biological Resources and the Proposed Project*.

TABLE 4.3-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO BIOLOGICAL RESOURCES AND THE PROPOSED PROJECT

Policy No.	Text
Opens Space, Conservation, and Recreation Element	
CO-7.1	**Protection of Native Plant Communities.** Protect native plant communities, especially oak woodlands, redwood forests, native perennial grasslands, and riparian woodlands, from the potential adverse impacts of development. Manage development in a way which prevents or mitigates adverse impacts to these communities.
CO-7.2	**Native Plant Restoration.** Encourage efforts should restore native plant communities in areas where they have been compromised by development or invasive species, provided that such efforts do not increase an area's susceptibility to wildfire.
CO-7.3	**Forested Character.** Make every effort to maintain the wooded or forested character of tree-covered lots when development occurs on such lots.
CO-7.5	**Non-Native Plant Removal.** Do not remove non-native plants within park and open space areas solely because they are non-natives. Plant removal should be related to other valid management policies, including fire prevention.
CO-8.1	**Mitigation of Development Impacts.** Work with federal, state, and regional agencies on an on-going basis to determine mitigation measures for development which could potentially impact wetlands. Strongly discourage development with unmitigable adverse impacts.
CO-9.1	**Habitat Protection.** Protect rare, endangered, and threatened species by conserving and enhancing their habitat and requiring mitigation of potential adverse impacts when development occurs within habitat areas.
CO-11.1	**Protection From Urbanization.** Protect wildlife from the hazards of urbanization, including loss of habitat and predation by domestic animals.
CO-11.2	**Migratory Corridors.** Protect and enhance migratory corridors for wildlife. Where such corridors are privately owned, require new development to retain native habitat or take other measures which help sustain local wildlife population and migratory patterns.

Source: City of Oakland, June 1996, *City of Oakland General Plan*, *Open Space, Conservation, and Recreation Element*.

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to biological resources in Oakland. Chapter 12.36, *Protected Trees,* contains the City's tree protection regulations. Section 12.36.010, *Intent and findings*, acknowledges that trees contribute to the attractiveness and livability of the city and have significant psychological and tangible benefits; they also contribute shade, moisture, climate, and wind control and play a significant part in the local economy and ecosystem. For these reasons, the City requires tree removal to be permitted to control the amount and types of trees

removed from the city. Section 12.36.060, *Conditions of approval*, includes conditions of approval for tree removal. According to the ordinance, a tree removal permit must be obtained to remove a "protected tree." A protected tree consists of any coast live oak (*Quercus agrifolia*) measuring four inches in diameter at breast height (dbh) or any other tree species measuring nine inches dbh or larger, except nonnative eucalyptus and Monterey pine (*Pinus radiata*). Monterey pine trees must be protected only on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed. Except as noted in the ordinance, eucalyptus and Monterey pine are not protected by the ordinance. Replacement tree plantings are typically required where native tree species are removed. Native protected trees proposed for removal must be replaced at a ratio of 1:1 if the replacement tree is a 24-inch box size and 3:1 if the replacement trees are 15-gallon size trees. Protected trees within 30 feet of construction must be identified. Adequate protection must also be provided during the construction period for any trees that are to remain in the vicinity of proposed development.

The OMC establishes a number of guidelines to protect Oakland's creeks by reducing and controlling stormwater pollution, preserving, and enhancing creekside vegetation and wildlife, and controlling erosion and sedimentation. OMC Chapter 13.16, *Creek Protection, Stormwater Management and Discharge Control*, prohibits activities that would result in the discharge of pollutants to Oakland's waterways or cause damage to creeks, creek functions, or habitat. Section 13.16.100, *Reduction of pollutants in storm water*, requires the use of standard best management practices to prevent pollution or erosion to creeks and/or storm drains. Additionally, Section 13.16.120, *Creek protection permit requirements*, requires a creek protection permit for any construction work on creekside properties. Section 13.16.150, *Creek protection plan*, specifies that a creek protection plan, when required, is to be submitted prior to the issuance of a creek protection permit.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCAs are related to biological resources and are applicable to the proposed project.

- SCA-28. Bird Collision Reduction Measures: The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following:
  a) For large buildings subject to federal aviation safety regulations, install minimum intensity white strobe lighting with three second flash instead of solid red or rotating lights.
  b) Minimize the number of and co-locate rooftop-antennas and other rooftop structures.
  c) Monopole structures or antennas shall not include guy wires.
  d) Avoid the use of mirrors in landscape design.
  e) Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule), as explained below.

f) Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following:
   i. Use opaque glass in window panes instead of reflective glass.
   ii. Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule).
   iii. Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule).
   iv. Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.
   v. Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans.
   vi. Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule).
   vii. Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides.
   viii. Install opaque window film or window film with a pattern/design which also adheres to the "two-by-four" rule for coverage.

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

h) Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following:
   i. Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws.
   ii. Distribution of educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials.
   iii. Asking employees to turn off task lighting at their work stations and draw office blinds, shades, curtains, or other window coverings at end of work day.
   iv. Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs.

v. Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible.

- SCA-29. Tree Removal During Bird Breeding Season: To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

- SCA-30. Tree Permit:
  a) Tree Permit Required. Pursuant to the City's Tree Protection Ordinance (OMC Chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.
  b) Tree Protection During Construction. Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:
     i. Before the start of any clearing, excavation, construction, or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.
     ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.
     iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of

the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.

iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.

v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.

vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.

c) Tree Replacement Plantings. Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria:

i. No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.

ii. Replacement tree species shall consist of *Sequoia sempervirens* (Coast Redwood), *Quercus agrifolia* (Coast Live Oak), *Arbutus menziesii* (Madrone), *Aesculus californica* (California Buckeye), *Umbellularia californica* (California Bay Laurel), or other tree species acceptable to the Tree Division.

iii. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.

iv. Minimum planting areas must be available on site as follows:

- For *Sequoia sempervirens*, three hundred fifteen (315) square feet per tree;
- For other species listed, seven hundred (700) square feet per tree.

v. In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.

vi. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense.

- SCA-31. Alameda Whipsnake Protection Measures:

a) Pre-Construction Survey Required. The project applicant shall hire a qualified biologist to conduct an Alameda whipsnake survey to identify the potential presence of Alameda whipsnakes at the project site. If the presence of Alameda whipsnakes is confirmed, the whipsnakes shall be

captured and relocated away from the construction area by a qualified biologist in accordance with all applicable regulations and guidelines. The biologist shall submit the results of the survey (and capture/relocation if applicable) to the City for review and approval.

b) Information and Protocols for Construction Workers. The biologist from section (a) above shall instruct the project superintendent and the construction crews (primarily the clearing, demolition, and foundation crews) of the potential presence, status, and identification of Alameda whipsnakes. The biologist shall also establish a set of protocols for use during construction concerning the steps to take if a whipsnake is seen on the project site, including who to contact, to ensure that whipsnakes are not harmed or killed. The project applicant shall submit evidence of compliance with these requirements to the City for review and approval.

c) Alameda Whipsnake Exclusion Fence. Unless alternative (equivalent or more effective) measures are recommended by the biologist, the project applicant shall install a solid fence to prevent whipsnakes from entering the work site. The snake exclusion fence shall be constructed as follows:

   i. Plywood sheets at least three feet in height, above ground. Heavy duty geotextile fabric approved by the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife may also be used for the snake exclusion fence;
   ii. Buried four to six inches into the ground;
   iii. Soil back-filled against the plywood fence to create a solid barrier at the ground;
   iv. Plywood sheets maintained in an upright position with wooden or masonry stakes;
   v. Ends of each plywood sheet overlapped to ensure a continuous barrier; and
   vi. Work site or construction area shall be completely enclosed by the exclusion fence or approved traps shall be installed at the ends of exclusion fence segments to allow capture and relocation of Alameda whipsnake away from the construction area by a qualified biologist. The location and design of the proposed exclusion fence shall be submitted for review and approval by the City and be included on plans for all construction-related permits.

d) Alameda Whipsnake Protection During Construction. The project applicant shall comply with the requirements in the above sections during construction activities. The approved protocol from section (b) above shall be followed in the event Alameda whipsnakes are encountered. The snake exclusion fence from section (c) above shall be installed and remain in place throughout the construction period. All construction activities and equipment/materials/debris storage shall take place on the project-side of the exclusion fence.

- SCA-47. Designated Very High Fire Severity Zone – Vegetation Management:

a) Vegetation Management Plan Required: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures:

   i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically;
   ii. Removal of leaves and needles from roofs and rain gutters;

iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure;
iv. Trimming back vegetation around windows;
v. Removal of flammable vegetation on hillside slopes greater than 20 percent; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5 percent or less, within 50 feet on slopes of 5 to 20 percent and within 100 feet or to the property line on slopes greater than 20 percent.
vi. All trees shall be pruned up at least a quarter the height of the tree from the ground at the base of the trunk;
vii. Clearing out ground-level brush and debris; and All non-ornamental plants, seasonal weeds and grasses, brush, leaf litter and debris within 30 feet of the residential structure shall be cut, raked and removed from the parcel.
viii. Stacking woodpiles away from structures at least 20 feet from residential structures.
ix. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species.

b) Fire Safety Prior to Construction: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6" or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code.
c) Fire Safety During Construction: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per Section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition.
d) Smoking Prohibition: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code.

- SCA-57. Vegetation Management on Creekside Properties: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project:
  a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat;
  b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact;
  c) Leave stumps and roots from cut down trees to prevent erosion;
  d) Plant fire-appropriate, drought-tolerant, preferably native vegetation;

e) Provide erosion and sediment control protection if cutting vegetation on a steep slope;
f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management;
g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine);
h) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat;
i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development;
j) Do not trim/prune branches that are larger than 4 inches in diameter;
k) Do not remove tree canopy;
l) Do not dump cut vegetation in the creek;
m) Do not cut tall shrubbery to less than 3 feet high; and
n) Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high.

- SCA-58. Creek Protection Plan:
  a) Creek Protection Plan Required. The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d).
  b) Construction Best Management Practices. The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control best management practices to protect the creek during construction. The measures shall include, but are not limited to, the following:
     i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.
     ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.
     iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.
     iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted.

v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.

vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.

vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.

viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.

ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.

x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.

xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains.

xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB).

xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City.

c) Post-Construction Best Management Practices. The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion.

d) Creek Landscaping. The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and

adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival.

e) Creek Protection Plan Implementation. The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.

4.3.1.2 EXISTING CONDITIONS

Vegetation and Wildlife Habitat

As shown on Figure 4.3-1, *Vegetation*, the project site supports a mosaic of grasslands, scrub, oak woodland, and chaparral as well as stands of planted ornamental trees. Several ephemeral creeks bisect the steep slopes of the project site, generally only conveying surface waters during or immediately following major precipitation events. Existing residential development borders the northwestern and northeastern edges of the project site, with the reclaimed face of the former Leona Quarry to the southeast. Undeveloped land to the south supports a similar mosaic of grassland, scrub, oak woodland, and chaparral as the project site.

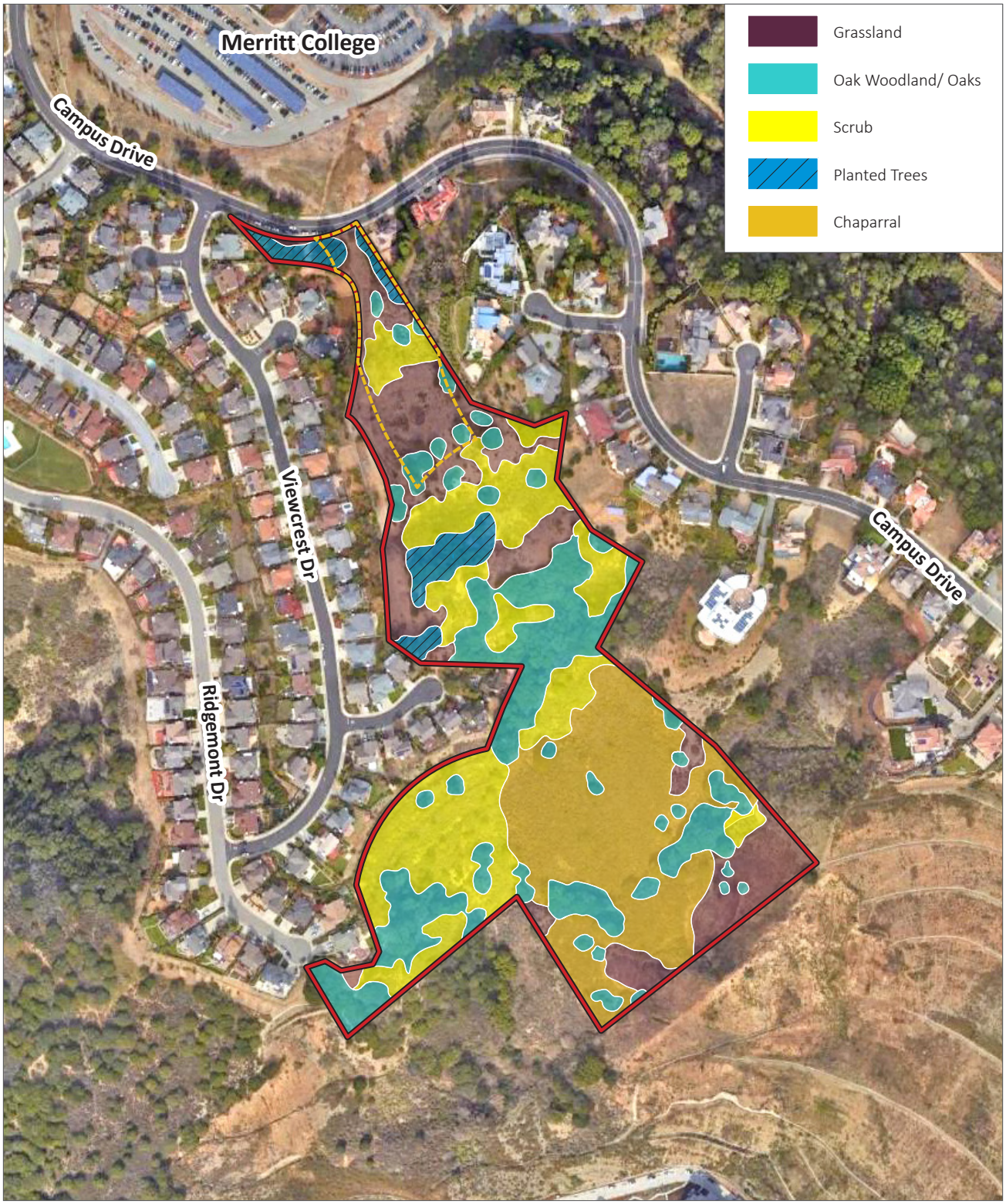
The majority of the proposed development area on the northern 2.6 acres of the project site has been disturbed by grading for past mineral exploration and adjacent development, and for the spread of highly invasive French broom (*Genista monspessulana*), which is being managed to reduce fire fuel loads. Cover in the proposed development area consists of grasslands and scrub cover, with scattered native coast live oaks. Planted Monterey pine and a row of planted coast redwood (*Sequoia sempervirens*) occur near the Campus Drive frontage of the project site within the proposed development area. Figure 4.3-2, *Biological Features*, shows the existing conditions associated with the proposed development area of the project site based on a 2020 aerial base map, including the location of ephemeral creeks in the northern portion of the project site.

The grassland and scrub cover in the proposed development area is composed of a mixture of native and nonnative species. French broom once dominated much of the grasslands in the northern half of the proposed development area, as evidenced by the numerous stumps and young seedlings. Nonnative grasses and forbs dominate most of the grasslands, composed of common species such as wild oats (*Avena* spp.), bromes (*Bromus* spp.), rattlesnake grass (*Briza* spp.), panic veldt grass (*Ehrharta erecta*), Italian thistle (*Carduus pycnocephalus*), short-pod mustard, (*Hirschfeldia incana*), rose clover (*Trifolium hirtum*), and scarlet pimpernel (*Lysimachia arvensis*). Native grasses and forbs such as purple needlegrass (*Stipa pulchra*), California melic (*Melica californica*), wildrye (*Elymus* spp.), California poppy (*Eschscholzia californica*), and blue-eyed grass (*Sisyrinchium bellum*) also occur in the grasslands, but not at high enough densities to be considered a sensitive natural community type. In addition to invasive French broom, native species forming dense stands of shrub cover include coyote brush (*Baccharis pilularis*), California coffeeberry (*Frangula californica*), poison oak (*Toxicodendron diversilobum*), and black sage (*Salvia*

mellifera). A list of plant species observed in the area of proposed development during the botanical survey is in Appendix D, *Biological Resources Data,* of this Draft EIR.

As mapped and described in the PAR, trees in the proposed development area consist primarily of scattered native coast live oaks, together with Monterey pine and coast redwood near the Campus Drive frontage. A total of 94 trees were evaluated in the PAR, providing information on species, trunk diameter, health, and suitability for preservation. These consisted of 42 coast live oaks, 31 Monterey pine, 14 coast redwood, 3 Italian stone pines (*Pinus pinea*), 2 holly oaks (*Quercus ilex*), 1 willow (*Salix* sp.), and 1 California bay (*Umbellularia californica*). For the coast live oaks, trees varied in condition and development state, and individual trunk diameters varied between 5 and 27 inches dbh, with an average trunk diameter of 10 inches. The Monterey pine were in fair to poor condition, with an average trunk diameter of 14 inches. The row of coast redwood is behind a fence at the northeast corner of the project site, generally in good condition with an average trunk diameter of 14 inches. The remaining trees are young, with trunk diameters of under 10 inches, with the exception of the willow, which was in poor condition, with sprouting from the failed root plate that creates a shrub-like form.

The grasslands, scrub, and woodlands provide denning, nesting, and foraging opportunities for numerous species of small mammals, reptiles, and birds. Mammals and reptiles found in the project site vicinity likely include deer mouse (*Peromyscus maniculatus*), California vole (*Microtus californicus*), Botta's pocket gopher (*Thomomys bottae*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), blue-bellied lizard (*Sceloporus occidentalis*), western skink (*Plestiodon skiltonianus*), newts, ensatina, ring-necked snake (*Diadophis punctatus*), gopher snake (*Pituophis catenifer*), and western rattlesnake (*Crotalus atrox*), among others. Larger mammals, such as black-tailed deer (*Odocoileus hemionus columbianus)*, and predatory species, such as grey fox (*Urocyon cinereoargenteus*), red fox *(Vulpes vulpes*), coyote (*Canis latrans*), and possibly occasionally mountain lion (*Puma concolor*), most likely forage throughout the woodlands and grasslands in the project vicinity. The trees provide nesting cavities, perching, and foraging opportunities as well as nesting substrate for numerous species of birds, including jays, woodpeckers, kinglets, and bushtits. Species commonly associated with suburban habitats, such as American robin (*Turdus migratorius*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), and California towhee (*Melozone crissalis*), also use the grassland, scrub, and scattered trees throughout the proposed development area on the project site. No large stick nests were observed during the field surveys, but several species of raptors likely use the mature trees for roosting and possibly nesting, with foraging in the understory of open grasslands and scrub. These include red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), white-tailed kite (*Elanus leucurus*), turkey vulture (*Cathartes aura*), great horned owl (*Bubo virginianus*), American kestrel (*Falco sparverius*), and barn owl (*Tyto alba*), among others.



Source: Google Earth, 2020. PlaceWorks, 2022. Environmental Collaborative, 2022.

0 500
Scale (Feet)

Approximate Project Site Boundary

Approximate Area of Proposed Development

Figure 4.3-1
Vegetation



Source: Google Earth, 2020. PlaceWorks, 2022. Environmental Collaborative, 2022.

0 200
Scale (Feet)

Approximate Project Site Boundary

Approximate Area of Proposed Development

Figure 4.3-2
Biological Features

Special-Status Species

Special-status species[4] are plants and animals that are legally protected under CESA and/or FESA or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Species protected by the CESA and FESA often represent major constraints to development, particularly when the species are wide ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" of these species.

Based on data from the CNDDB and other information sources, numerous special-status plant and animal species have been reported from the surrounding area of the Oakland Hills. Figure 4.3-3, *Special-Status Plants and Sensitive Natural Communities,* and Figure 4.3-4, *Special-Status Animals and Critical Habitat*, show the known occurrences of special-status plant and animal species, respectively, in the Oakland area based on the CNDDB inventory, which indicates that there are no known specific occurrences from the project site or immediate vicinity. Broad occurrences for four special-status plant species—most beautiful jewelflower (*Streptanthus albidus* ssp. *peramoenus*), Marin knotweed (*Polygonum marinense*), woodland woollythreads (*Monolopia gracilens*), and fragrant fritillary (*Fritillaria liliacea*) extend over portions of the project site and surrounding hillside areas. Broad occurrences of the federally threatened bay checkerspot butterfly *(Euphydryes editha bayensis*) and obscure bumblebee (*Bombus caliginosus*) extend over the project site and surrounding hillside areas. As indicated on Figure 4.3-4, the project site is about 1.5 miles west of designated critical habitat for the State and federally threatened Alameda whipsnake (*Masticophis lateralis euryxanthus*), and several historical records for this species have been reported from the surrounding hillside areas but not extending over the project site. Critical habitat is a term in the FESA for areas designated by the USFWS that have features essential for the conservation of a threatened or endangered species and may require special management considerations.

A habitat assessment was conducted by the EIR biologist as part of the field surveys of the proposed development area. Suitable habitat for most special-status species known from the surrounding area is generally absent from the proposed development area on the project site, with the exception of known occurrences of Oakland star tulip (*Calochortus umbellatus*) and San Francisco dusky footed woodrat (*Neotomes fuscipes annectens*), and the possibility of nesting by raptors and other native birds protected under the MBTA and California Fish and Game Code, roosting bat species, and potential for dispersal by Alameda whipsnake and mountain lion. Included herein is a summary of the special-status plant and

[4] Special-status species include:

- Officially designated (rare, threatened, or endangered) and candidate species for listing identified by the CDFW;
- Officially designated (threatened or endangered) and candidate species for listing identified by the USFWS;
- Species considered to be rare or endangered under the conditions of Section 15380 of the CEQA Guidelines, such as those with a rank of 1 or 2 in the *Inventory of Rare and Endangered Plants of California* maintained by the California Native Plant Society (CNPS); and
- Possibly other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those with a rank of 3 and 4 in the CNPS *Inventory* or identified as animal "Species of Special Concern" (SSC) by the CDFW that have no legal protective status under CESA but are of concern to the CDFW because of severe decline in breeding populations in California.

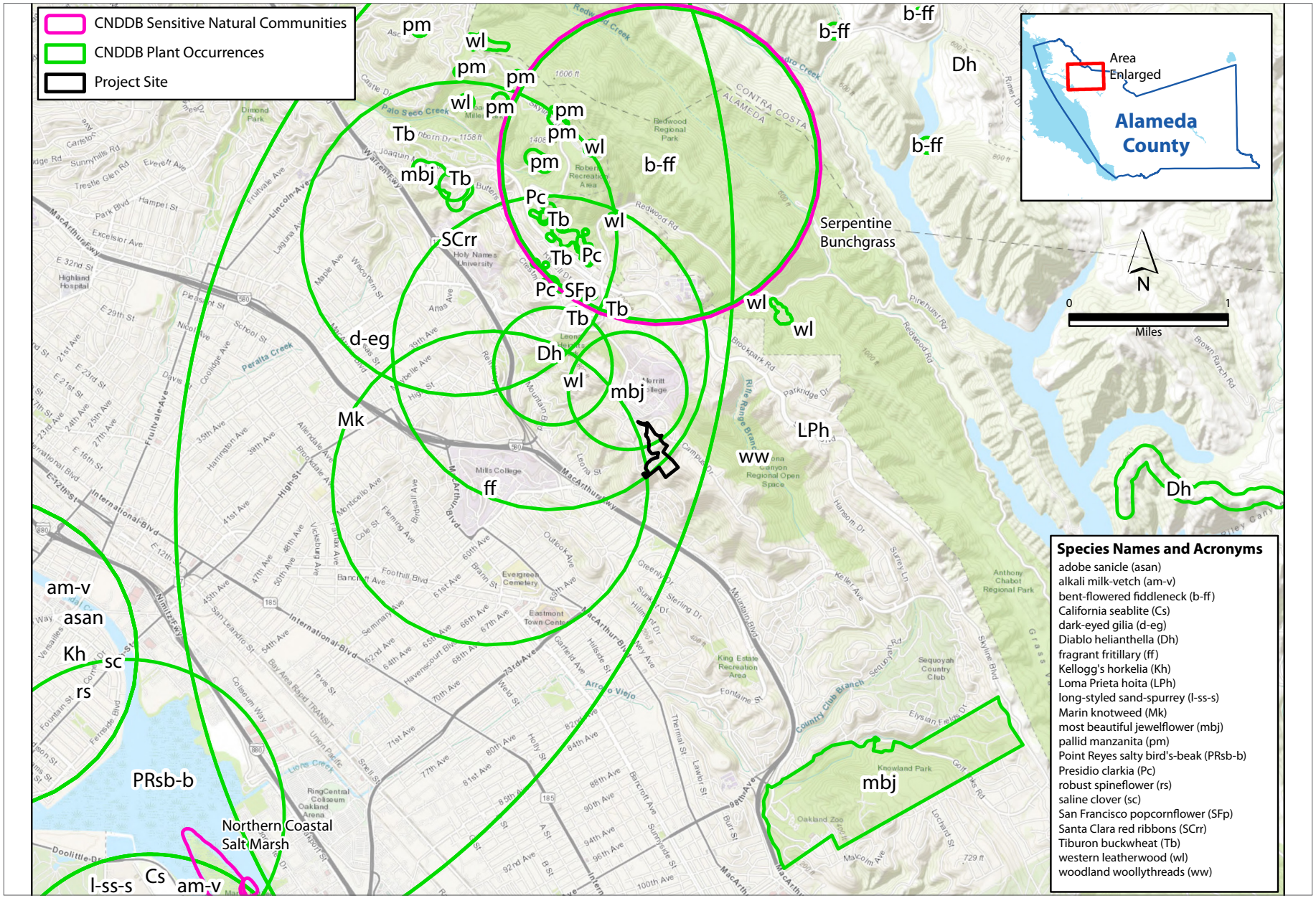
animal species known from the Oakland Hills vicinity, which includes conclusions regarding presence or absence from the proposed development area.

As described, systematic surveys were conducted to determine whether any special-status plant species are present on the proposed development area of the project site. An initial field reconnaissance survey was conducted on April 28, 2020, followed by systematic surveys on May 6 and 31, and August 18, 2020. A follow-up survey was conducted on March 31, 2021, to inspect the proposed development area and the spur ridge to the south on the project site, to confirm whether Oakland star tulip was present on this portion of the site. The surveys were conducted in accordance with CDFW guidelines for conducting rare plant surveys, during which all plants encountered were identified to the degree necessary to determine possible rarity. A list of plant species encountered within the proposed development area on the project site is in Appendix D, *Biological Resources Data*, of this Draft EIR.

The only special-status plant species encountered during the systematic surveys or believed to be present within the proposed development area on the project site is Oakland star tulip. As indicated on Figure 4.3-2, this species is widespread through the central portion of the proposed development area and also occurs on the grassland-dominated spur ridge to the south. At the time of the surveys in 2020 and 2021, these consisted of about 100 individuals in the northern area (Location #1), about 300 individuals in the central area (Location #2), and about 40 individuals in the southern area (Location #3). Oakland star tulip is not listed under CESA and/or FESA and has a CNPS California Rare Plant Rank of 4.2 (plant species of limited distribution, a watch list). Very few plants with a Rare Plant Rank of 4 from the CNPS Inventory are eligible for state listing, but some may be of local significance, and CNPS recommends that they be evaluated for consideration during preparation of environmental documents under CEQA.

Oakland star tulip is a perennial herb that has been reported from Modoc to Santa Clara Counties, found in chaparral, valley grassland, yellow pine forest, and mixed evergreen forest. The Calflora website identifies 94 records of this species in Alameda County. The closest of these is from other locations in the Viewcrest and Leona Heights vicinities, including records from 1917, 1936, 1944, and 1998.[5] It is relatively abundant throughout its limited range. The Technical Appendices (Volume 1, Chapter 3) of the Oakland General Plan Open Space, Conservation, and Recreation Element provides information on the definition of special-status species used by the City of Oakland and identifies 31 special-status plant species known from the East Bay area, which include Oakland star tulip.

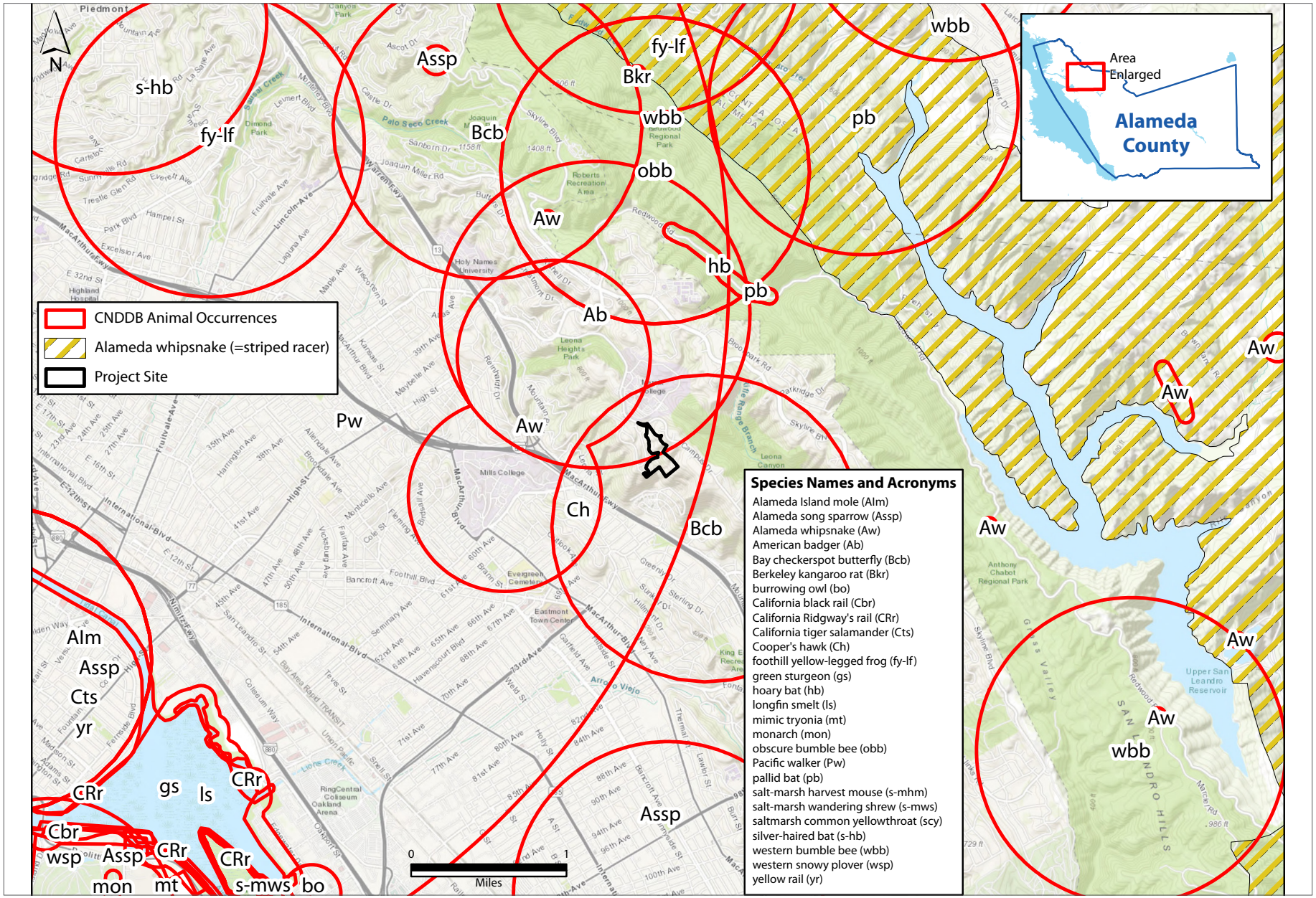
[5] Calflora, 2022, Observation Search, https://www.calflora.org/entry/observ.html, accessed November 4, 2022.



Source: California Natural Diversity Database release date 10/02/2022 accessed on 10/18/2022;
Basemap by: ESRI. Map produced by www.digitalmappingsolutions.com on 10/19/2022.

Figure 4.3-3

Special-Status Plants and Sensitive Natural Communities



Source: California Natural Diversity Database release date 5/1/2022 accessed on 6/6/2022; USFWS critical habitat data release date 6/3/2022 accessed on 6/6/2022. Basemap by: ESRI. Map produced by www.digitalmappingsolutions.com on 10/19/2022.

Figure 4.3-4
Special-Status Animals and Critical Habitat

Special-Status Animals

A number of bird, mammal, reptile, and invertebrate species with special status are known or suspected to possibly occur in the Oakland Hills vicinity. Figure 4.3-4 shows the distribution of the 27 special-status animal species within about 5 miles of the project site, based on records maintained by the CNDDB. These include Alameda whipsnake, American badger (*Taxidea taxus*), Bay checkerspot butterfly, burrowing owl (*Athene cunicularia*), California tiger salamander (*Ambystoma californiense*), foothill yellow-legged frog (*Rana boylii*), Berkeley kangaroo rat (*Dipodomys heermanni berkleyensis*), hoary bat (*Aeorestes cinereus*), obscure bumble bee (*Bombus caliginosus*), pallid bat (*Antrozous pallidus*), San Francisco dusky-footed woodrat (*Neotomes fuscipes annectens*), western bumble bee (*Bombus occidentalis*). Many of the species from Figure 4.3-4 are associated with salt marsh habitat and other habitat conditions listed in the CNDDB, but they are not found anywhere near the project site and are not considered to be present, such as Alameda song sparrow (*Melospiza melodia pusillula*), Ridgway's rail (*Rallus obsoletus*), longfin smelt (*Spirinchus thaleichthys*), Alameda Island mole (*Scapanus latimanus parvus*), and salt marsh harvest mouse (*Reithrodontomys raviventris*), among others. This includes the absence of freshwater marsh and riparian habitat necessary for breeding and occupation by California red-legged frog (*Rana draytonii*), western pond turtle (*Actinemys marmorata*), native grassland and scrub habitat with friable soils necessary to support Berkeley kangaroo rat, native serpentine grassland and larval host plant species for bay checkerspot butterfly, and dense stands of blue gum eucalyptus necessary to support overwintering areas for monarch butterfly (*Danaus plexippus*). The following provides a summary of special-status animal species considered to have the highest potential for occurrence in the project site vicinity and conclusions with regard to presence or absence in the proposed development area on the project site.

Amphibians and Reptiles

Most of the special-status amphibian and reptile species known from the surrounding region, including California tiger salamander, California red-legged frog, western pond turtle, and foothill yellow-legged frog, are dependent on aquatic habitat not found within the project site or surrounding area. None of these four species has been reported or observed within the surrounding watershed lands, and suitable pond or pool habitat necessary for successful breeding and refugia is absent on the project site.

Alameda Whipsnake. The range of the federally and State-threatened Alameda whipsnake is restricted to the inner Coast Range in western and central Contra Costa and Alameda Counties. Typical habitat characteristics for Alameda whipsnake consists of stands of chaparral and scrub habitat that contain abundant prey species, such as western fence lizard, with abundant areas for sunning and other behaviors. This subspecies is known to use adjacent areas of grassland, woodland, and riparian habitats, but chaparral and scrub habitats are essential for occupation in an area. The project site is separated from the designated critical habitat for Alameda whipsnake by existing residential development along Campus Drive and Skyline Boulevard.

The stands of chaparral and dense scrub in the southern portion of the project site provide suitable essential habitat for Alameda whipsnake. There are no recent records of Alameda whipsnake from this part of its range, with records from the vicinity of Mills College in 1904 and from Leona Park in 1953. The grasslands and scrub that dominate the proposed development area of the project site are separated by the high-quality habitat by dense stands of oak woodlands (see Figure 4.3-1), and its suitability for even

occasional dispersal and foraging diminishes the closer one gets to Campus Drive. Many of the slopes in the proposed development area have been graded, and cover in the grasslands tends to be sparse. This portion of the project site has also undergone repeated disturbance from removal of invasive French broom, and proximity to existing residences likely diminishes its value as potential foraging habitat for Alameda whipsnake. However, protocol surveys typically performed to provide evidence of presence or absence have not been conducted for the project site, and there remains a possibility a population may be present in the intact chaparral and scrub habitat. The potential remains for individual Alameda whipsnake to occasionally disperse into the northern portion of the project site through the woodlands and into areas of scrub and open grassland habitat.

Birds

Most of the special-status animal species known or suspected to occur in the Oakland Hills are bird species that may forage and possibly nest where suitable nesting substrate is present. These include Cooper's hawk, sharp-shinned hawk (*Accipiter striatus*), golden eagle (*Aquila chrysaetos*), western burrowing owl, northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus caeruleus*), California horned lark (*Eremophila alpestris actia*), prairie falcon (*Falco mexicanus*), loggerhead shrike (*Lanius ludovicianus*), and yellow warbler (*Dendroica petechia*). Golden eagle, northern harrier, yellow warbler, California horned lark, and loggerhead shrike are considered California SSC by the CDFW.[6] White-tailed kite and golden eagle are fully protected species, and golden eagle is also protected under the federal Bald and Golden Eagle Protection Act. The other species are monitored to varying degrees by the CNDDB, focusing on nest locations. Some were previously considered California SSC by the CDFW but have been removed from the list as new data indicate they are more abundant than previously believed.

Suitable nesting habitat is absent on the project site for American peregrine falcon (*Falco peregrinus*), golden eagle, and prairie falcon due to the absence of cliffs and other nesting substrate and the intensity of human activity in the area, but these species may occasionally forage in the remaining grasslands and open woodlands in the project vicinity. Similarly, the absence of ground squirrels and the steep topography in the proposed development area precludes the presence of nesting by western burrowing owl. Potentially suitable habitat for the remaining species and other, more common bird species is present in the areas of open grasslands, scrub, scattered trees, and woodland vegetation. More common raptors, such as the great horned owl, red-tailed hawk, and American kestrel may nest in mature trees on the project site and vicinity, and there is also potential for nesting by more common bird species.

Nests of native bird species are protected under the MBTA when in active use, and nests of raptors (birds-of-prey) are also protected under California Fish and Game Code when in active use. No nesting locations have been identified by the CNDDB for special-status bird species in the project site vicinity or were observed during the field surveys of the proposed development area on the project site. However, there remains a potential for new nests to be established in the future. Preconstruction surveys are typically preformed to avoid disturbance or inadvertent abandonment of nests in active use when vegetation removal or construction is to be initiated during the nesting season (typically from February 1 through August 15).

[6] "California Species of Special Concern" (SSC) have no legal protective status under the California Endangered Species Act but are of concern to the CDFW because of severe decline in breeding populations and other factors.

Mammals

A number of special-status animal species are known or suspected from the region, including San Francisco dusky-footed woodrat, several bat species, American badger, and mountain lion. As indicated on Figure 4.3-4, occurrences of pallid bat, hoary bat, and silver-haired bat (*Lasionycteris noctivagans*) have been reported from the Oakland Hills vicinity by the CNDDB, and other bat species, such as Townsend's big-eared bat (*Corynorhinus townsendii*) are known from the region. Pallid and Townsend's big-eared bat are considered California SSC by the CDFW. Roost locations of hoary bat and other bat species on the *Special Animals List*[7] maintained by the CDFW are infrequently monitored by the CNDDB. Suitable habitat varies for each species, but roosting locations can include trees, tree cavities, abandoned or infrequently used buildings, caves, mines, and cliff faces. No bats or evidence of bat occupation was observed during field surveys of the proposed development area on the project site, but individuals could occupy cavities in some of the larger trees or could establish roosts in advance of construction.

The San Francisco dusky-footed woodrat is considered a California SSC by the CDFW. It is a year-round resident in the San Francisco Bay Area, preferring scrub and wooded areas, and feeds primarily on nuts, fruits, fungi, foliage, and forbs. It typically builds large terrestrial stick nests that range from 2 to 5 feet in height and can be up to 8 feet in basal diameter. These nests are usually placed on the ground or against a log or tree and are often within dense brush. As indicated on Figure 4.3-2, a characteristic stick nest of the species was observed along the southern edge of the proposed development area. Suitable scrub, woodland, and chaparral habitat required by the San Francisco dusky-footed woodrat is present across much of the project site, although the suitability of most of the proposed development area is relatively low given the dominance by grassland and invasive shrub species.

Several other special-status mammal species have varying potentials for occurrence in the project vicinity. Mountain lion is fully protected under California Fish and Game Code and the evolutionarily significant unit encompassing Southern California and the central coast is currently designated as a candidate species by the CDFW. The Fish and Game Commission is currently conducting a status review of mountain lions within the proposed evolutionarily significant unit. At the end of the review, CDFW will make its recommendation on listing to the Commission. Under CESA, species classified as a candidate species are afforded the same protection as listed species. Mountain lions have large home ranges that may include heterogenous habitats, including riparian, chaparral, oak woodlands, coniferous forests, grasslands, and occasionally rocky desert uplands. Individuals are known to forage and disperse through the open space and undeveloped lands in the Oakland Hills. The project site lacks suitable denning locations for the species, and the proposed development area is not considered essential habitat for mountain lions given the extent of past disturbance and proximity of existing development. However, it may forage and move across the project site and surrounding areas.

Similarly, American badger is also recognized as a California SSC by CDFW and may occasionally forage through the grasslands and open woodlands in the Oakland Hills. However, suitable grassland foraging habitat is absent from the proposed development area on the project site, and no evidence of dens or

[7] California Department of Fish and Wildlife, California Natural Diversity Data Base, October 2022, *Special Animals List*, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406, accessed November 4, 2022.

diggings by this species were observed during the field surveys. Other mammal species known or suspected from the region are not believed to occur on the project site because of the absence of suitable habitat and distance from known occupied habitat. These species include San Joaquin kit fox (*Vulpes macrotis mutica*), which occurs in grassland and alkali scrub habitat to the east of Livermore, and Berkeley kangaroo rat, which is now presumed to be extinct.

Invertebrates

Suitable habitat for the invertebrate species reported in the CNDDB from the Oakland Hills is generally low to absent at the project site. This includes the absence of larval host plants needed to support bay checkerspot butterfly, blue gum eucalyptus to support overwintering colonies of monarch butterfly, and aquatic conditions necessary to support mimic tryonia and Pacific walker. Western bumblebee and obscure bumblebee have been reported from the Oakland Hills vicinity and are found in a variety of habitats. They and other native bumblebee species are now being more closely monitored by the CNDDB and other databases because of a dramatic decline in numbers and distribution over the past two decades. Obscure bumblebee has no conservation status or listing under CESA or FESA, and western bumble bee is a candidate for endangered status under the CESA. Due to declines, the western bumblebee has experienced a considerable range contraction and is now considered confined to higher elevations in the Sierra Nevada range and portions of the Northern California coast; it is no longer suspected to occur in the Oakland vicinity. Obscure bumblebee has also experienced considerable declines in distribution, with most occurrences in California now reported from coastal areas. Obscure bumblebee are typically known from grassland and scrub habitats, but the rocky substrate and minimal soils make their possible presence within the proposed development area on the project site highly unlikely. The presence of either of these bumblebee species on the project site, for either foraging or nesting, is highly unlikely.

Sensitive Natural Communities

Sensitive natural communities are community types recognized by CDFW and other agencies because of their rarity. In the Oakland Hills area, sensitive natural community types include serpentine and other native grasslands, riparian scrub and woodlands, and freshwater marshlands, among other community types. Figure 4.3-3 shows a broad occurrence of serpentine bunchgrass natural community encompassing a portion of the Oakland Hills where serpentine-derived soils are prevalent, approximately 0.6 miles north of the project site, but this soil type does not occur in the project site vicinity and there are no known occurrences of sensitive natural communities mapped nearby.

Based on the findings of the field surveys by the EIR biologist, there are no sensitive natural community types within or near the proposed development area on the project site. The ephemeral creek just south of the proposed development area contains no wetlands or riparian indicator species. Although some native grassland species, including purple needlegrass and creeping wild rye, are present in the remaining areas of grassland cover, they don't occur at high enough density or native species component to qualify as a sensitive natural community type. Much of the hillside slopes of the proposed development area have been graded or disturbed by other activities in the past.

Sensitive natural community types appear to be largely absent on the remainder of the project site as well. Some stands of native purple needlegrass may qualify as sensitive natural communities but are relatively small in size and appear to be transitioning into stands of scrub and woodland due to a lack of grazing and absence of periodic fires. The nearby oak woodlands to the south of the proposed development area, while considered important for their wildlife habitat value, are dominated by coast live oak, which is widespread and a common species. Similarly, the chamise- and manzanita-dominated stands of chaparral provide important wildlife habitat, but generally do not qualify as a sensitive natural community type. Some alliances with black sage may qualify as a sensitive natural community type, but the reconnaissance-level inspection of the stands of chaparral on the project site did not indicate a codominance with black sage.

Jurisdictional Waters

The CDFW, USACE, and RWQCB have jurisdiction over modifications to riverbanks, lakes, stream channels, and other regulated waters, as discussed under Section 4.3.1.1, *Regulatory Framework*. Wetlands are generally considered areas that are periodically or permanently inundated by surface or groundwater and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife; use as storage areas for storm and flood waters; and water recharge, filtration, and purification functions. Where wetland vegetation is absent, federally regulated waters occur along stream channels below the Ordinary High Water Mark. State waters regulated by the RWQCB and CDFW extend to the top of bank or to the limits of riparian vegetation beyond the top of bank along natural drainage channels, whichever is greater.

Based on the results of the preliminary wetland assessment performed as part of the surveys of the proposed development area of the project site, jurisdictional waters are limited to the ephemeral creek to the south of the proposed development area and several other ephemeral creeks on the project site (see Figure 4.3-2). The ephemeral creeks supported no wetland indicator species, and accumulated debris obscured evidence of past flows, which presumably only occur during or immediately after storm events. These features flow into existing storm drainage systems that discharge into regulated waters downstream of the project site. A formal wetland delineation has not been prepared for or submitted to the USACE to verify whether the ephemeral creeks are regulated other waters under Section 404 and Section 401 of the CWA.

Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by impassible barriers, large bodies of water, distinct changes in cover, and intense human activity, among other factors. Urbanization and the resulting fragmentation of undeveloped open space areas can create isolated “islands” of wildlife habitat, separating populations that can lead to genetic isolation and sometimes extirpation. Corridors act as an effective link between populations, allowing for genetic exchange and recruitment of dispersing individual animals where the local carrying capacity, competition, and other influences allow.

Given the undeveloped nature and absence of any internal fencing, the project site provides opportunities for unrestricted wildlife movement throughout the approximately 20-acre property. Wildlife movement in the northern portion of the property becomes increasingly restricted as one approaches Campus Drive due to the fenced yard areas of the adjacent properties to the west and east. Deer and larger terrestrial species most likely cross Campus Drive from the project site to the nearby Merritt College property further north. However, Campus Drive likely forms a formable barrier to smaller wildlife due to the concrete sidewalks, curb and gutter, and the wide roadway width.

4.3.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant impact to biological resources if it would:

1. 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.
2. 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 Wildlife or U.S. Fish and Wildlife Service.
3. 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.
4. 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.
5. Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan.
6. Fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code (OMC) Chapter 12.36) by removal of protected trees under certain circumstances. *[NOTE: Factors to be considered in determining significance include the number, type, size, location and condition of (a) the protected trees to be removed and/or impacted by construction and (b) protected trees to remain, with special consideration given to native trees. Protected trees include Quercus agrifolia (California or coast live oak) measuring four inches diameter at breast height (dbh) or larger, and any other tree measuring nine inches dbh or larger except eucalyptus and Pinus radiata (Monterey pine); provided, however, that Monterey pine trees on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed are considered to be protected trees]*
7. Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources. *[NOTE: Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of riparian and/or aquatic habitat through (a) discharging a substantial amount of pollutants into a creek, (b) significantly modifying the natural flow of the water, (c)*

depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability, or (d) adversely impacting the riparian corridor by significantly altering vegetation or wildlife habitat]

8. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to biological resources.

4.3.3 IMPACT DISCUSSION

BIO-1	**The proposed project could 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.**

As discussed in Section 4.3.1.2, *Existing Conditions*, the habitat suitability analysis conducted by the EIR biologist as part of the field surveys determined that suitable habitat for most special-status species is absent from the proposed 2.6-acre development area on the project site. However, the proposed project would adversely affect the occurrences of Oakland star tulip and at least one San Francisco dusky-footed woodrat nest in the northern portion of the project site. Grubbing and grading would eliminate much of the two northern occurrences of Oakland star tulip (see Locations #1 and #2 on Figure 4.3-2), as well as the San Francisco dusky-footed woodrat nest. Tree removal and grubbing could also result in the inadvertent loss of roosting habitat for several special-status bats, and active bird nests protected under federal and State regulations, if present within the proposed development area during construction. In addition, there is a remote possibility that Alameda whipsnake could disperse into the proposed development area and could be inadvertently harassed, injured, or killed during construction if appropriate controls are not implemented as part of the proposed project or as part of future fire fuel management practices in the permanent 17.4-acre conservation open space portion of the project site. This discussion provides an assessment of the potential impacts on these special-status species, together with a review of applicable Oakland SCAs and need for additional mitigation for potentially significant impacts.

Oakland Star Tulip

Grading and other construction activities would require the removal of most of the two occurrences of Oakland star tulip within the proposed development area (see Locations #1 and #2 on Figure 4.3-2). Based on estimates obtained during surveys conducted in 2020 and 2021, an estimated 400 plants could be lost or damaged as a result of the proposed project. Because Oakland star tulip is not listed under CESA and/or FESA and has a CNPS California Rare Plant Rank of 4.2 (plant species of limited distribution, a watch list) rather than a higher Ranking of 1 or 2, complete avoidance of the occurrences on the project site is not warranted. It does warrant some consideration as a species of local concern, given it is identified as a special-status species in the Oakland General Plan Open Space, Conservation, and Recreation Element (see Technical Appendices in Volume 1, Chapter 3). However, the City has no specific policies or practices in place about protecting CNPS California Rare Plant Rank 4 species.

The loss of the majority of the occurrences at Locations #1 and #2 would be a *significant* impact on this special-status species. Permanent protection of Location #3 and transplanting individual Oakland star tulip within the limits of proposed grading and disturbance from Locations #1 and #2 to a suitable location, together with maintenance of the relocation site to prevent invasive species from precluding future survival of this species at this location would serve to address potential impacts on this special-status species, as recommended in Mitigation Measure BIO-1.1.

Impact BIO-1.1: Project site preparation (clearing and grading) during the construction phase on the proposed 2.6-acre development area and on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) would adversely affect the occurrences of Oakland star tulip.

Mitigation Measure BIO-1.1a: The project applicant shall preserve the 17.4-acre portion of the project site as conservation open space in perpetuity for the protection of sensitive natural communities and special status species. No actions that will materially impair the character of the 17.4 acres of conservation open space would be permitted. This includes activities that may destroy the unique physical and scenic characteristics of the land, such as the cutting of timber, trees, and other natural growth, except as may be required for fire prevention, thinning, elimination of diseased growth, and similar protective measures. Any required vegetation clearing shall be performed by hand. No future trails or recreational features would be permitted for use by the future Homeowners Association (HOA) or other community members. The future HOA would be responsible for posting and maintaining signage informing the HOA members of the no-access requirement due to sensitive biological habitat. Prior to issuance of building permits, the project applicant shall provide proof of the permanent conservation to the satisfaction of the City of Oakland, for example, by formalizing the land as a conservation easement pursuant to California Civil Code Section 815, if feasible, or if not feasible, as determined by the City of Oakland, the project applicant shall enter into an agreement with the City of Oakland as to the proof of the permanent conservation of the 17.4 acres to be maintained by the future HOA as described in this mitigation measure.

Mitigation Measure BIO-1.1b: Adequate measures shall be taken to address the loss of occurrences of Oakland star tulip in the proposed development area on the project site. This shall be accomplished by taking the following steps:

- An Oakland Star Tulip Relocation and Maintenance Plan (OST Plan) shall be prepared by a qualified botanist or habitat restoration specialist for review and approval by the City.
- The OST Plan shall define how individual plants within the proposed limits of grading and disturbance shall be salvaged and transplanted to the vicinity of the spur ridge known to support Oakland star tulip to the south of the proposed development area.
- Individual Oakland star tulip plants shall be salvaged and transplanted at the appropriate time of the year to maximize their chances for successful re-establishment based on successful relocation programs, and shall be installed in a manner that minimizes potential disturbance to the existing Oakland star tulip plants at that location.

- The OST Plan shall include details on monitoring and maintenance that shall be performed for a minimum of five years. This shall include annual surveys to determine success of relocation and re-establishment, as well as the need for necessary maintenance activities.
- The area used for transplanting relocated Oakland star tulip plants shall be treated for invasive species removal, as called for in the Maintenance and Monitoring Plan in Mitigation Measure BIO-1.3, to prevent the establishment and spread of invasive species that could otherwise occupy the area and create conditions unsuitable for Oakland star tulip.

Together with permanent protection of the southern known occurrence of Oakland star tulip in the open space area on the project site, the OST Plan would serve to adequately address potential impacts on this species.

Significance with Mitigation: Less than significant.

Nesting Raptors and Other Native Birds

Grading and other construction activities would require the removal of trees and other vegetation that provide suitable nesting habitat for numerous species of raptors and more common native bird species. Destruction of an active nest would be a violation of the MBTA and California Fish and Game Code, and appropriate avoidance measures would be required to ensure compliance with these regulations. Vegetation removal and other construction activities in close proximity of nests in active use could lead to nest abandonment, unless appropriate seasonal restrictions are implemented. Destruction of bird nests in active use or activities that could lead to nest abandonment would also be a violation of the federal and State regulations.

The proposed project would be required to adhere to SCA-29, *Tree Removal During Bird Breeding Season*, which provides standard methods to address the potential for nesting birds. These methods include either initiating tree and vegetation removal during the non-nesting season (August 16 to January 31) or conducting a nesting survey within 15 days prior to initial tree removal and construction if it is infeasible to implement during the nonnesting season. This will help to determine whether any active nests are present on the project site that must be protected until any young have fledged and are no longer dependent on the nest. Protection of the nest(s), if present, would require that construction setbacks be provided during the nesting and fledging period, with the setback depending on the type of bird species, degree to which the individuals have already acclimated to other ongoing disturbance, and other factors. Adherence to SCA-29 would ensure compliance with the MBTA and California Fish and Game Code, and potential impacts on nesting birds would be *less than significant*, and no mitigation is considered necessary.

Significance without Mitigation: Less than significant.

Roosting Bats

Tree removal and construction disturbance as part of grading and construction in the immediate vicinity of an active bat roost could affect special-status bats and other more common bats, if present. Direct impacts on bats could occur if construction activities resulted in direct mortality or the disruption or

abandonment of an active bat roost(s). While no evidence of any active bat roosts was observed during the field surveys of the proposed development area on the project site, the scattered oaks and ornamental tree plantings provide potentially suitable roosting habitat. A standard method to address the potential for roosting bats is to conduct a roosting survey within seven days prior to initial tree or building removal and construction to determine whether any active roosts are present that must be protected until any young have fledged and are no longer dependent on the roost. Protection of the roost, if present, would require construction setbacks, with the setback depending on the type of bat species, degree to which the individuals have acclimated to ongoing disturbance, and other factors. Without these controls, the tree removal could adversely affect roosting bats, which would be a potentially *significant* impact.

Impact BIO-1.2: Removal of trees during project construction or as part of future fire fuel management activities on the proposed 2.6-acre development area and on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) may result in the inadvertent destruction of active bat roosts.

Mitigation Measure BIO-1.2a: Implement Mitigation Measure BIO-1.1a.

Mitigation Measure BIO-1.2b: Adequate measures shall be taken to avoid inadvertent take of special-status bat species if present in trees within the proposed development area on the project site. This shall be accomplished by taking the following steps:

- A qualified biologist shall visually inspect trees to be removed for bat roosts within seven days prior to their removal. The biologist shall look for signs of bats, including sightings of live or dead bats, bat calls or squeaking, the smell of bats, bat droppings, grease stains or urine stains around openings in trees, or flies around such openings. Trees with multiple hollows, crevices, forked branches, woodpecker holes, or loose and flaking bark have the highest chance of occupation and shall be inspected the most carefully.
- If signs of bats are detected, confirmation on presence or absence shall be determined by the qualified biologist, which may include night emergency or acoustic surveys.
- Due to restrictions of the California Health Department, direct contact by workers with any bat is not allowed. The qualified bat biologist shall be contacted immediately if a bat roost is discovered during project construction.
- If an active maternity roost is encountered during the maternity season (April 15 to August 31), the California Department of Fish and Wildlife shall be contacted for direction on how to proceed, and an appropriate exclusion zone shall be established around the occupied tree or structure until young bats are old enough to leave the roost without jeopardy. The size of the buffer shall take into account:
  - Proximity and noise level of project activities.
  - Distance and amount of vegetation or screening between the roost and construction activities.
  - Species-specific needs, if known, such as sensitivity to disturbance.

Significance with Mitigation: Less than significant.

San Francisco Dusky-Footed Woodrat

The scattered oaks and scrub within the proposed development area provide suitable habitat for San Francisco dusky-footed woodrat. If active nests are present within the limits of proposed development or areas where vegetation is to be modified as part of fire fuel management activities, they could be inadvertently destroyed as a result of vegetation clearing and grading, resulting in a loss of active nests and possibly individual woodrats. Preconstruction surveys would be necessary to confirm no previously undetected or new nests have been built by woodrats in advance of initial vegetation removal and construction, as well as ongoing fire fuel management activities on the proposed 2.6-acre development area and the proposed 17.4-acre conservation open space area (see discussion in Chapter 4.17, *Wildfire*, of this Draft EIR). Without these controls, this would be a potentially *significant* impact on San Francisco dusky-footed woodrat.

Impact BIO-1.3: Removal of trees and dense vegetative cover during project construction or as part of future fire fuel management activities on the proposed 2.6-acre development area and on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) may result in the inadvertent destruction of active nests of San Francisco dusky-footed woodrat.

Mitigation Measure BIO-1.3a: Implement Mitigation Measure BIO-1.1a.

Mitigation Measure BIO-1.3b: Adequate measures shall be taken to avoid inadvertent take of San Francisco dusky-footed woodrats on the project site. This shall be accomplished by taking the following steps, which shall be incorporated into the project-specific Vegetation Management Plan pursuant to Standard Condition of Approval 47(a)(ix):

- A qualified biologist shall be retained to conduct a preconstruction survey for San Francisco dusky-footed woodrats, to determine whether any stick nests are present in the vicinity of proposed vegetation removal and development. The survey shall be performed within 30 days prior to initiation of vegetation removal and grading in the proposed development area or at least seven days before fire fuel management activities involving the removal of brush and trees in the open space area.
- If any nests are encountered within the limits of proposed grading and vegetation removal in the proposed development area, a trapping and relocation effort shall be conducted outside the breeding season (March 1 through August 31) to ensure any young are not inadvertently lost due to the destruction of the protective nest.
- Any nests within the construction zone of the proposed 2.6-acre development area shall be relocated to locations provided as undeveloped conservation open space and individual woodrats released into their relocated nests. The trapping and relocation effort shall preferably be conducted within seven days prior to grubbing and vegetation removal to prevent individual woodrats from moving back into the construction zone.
- Any nests detected in areas of brush and trees to be treated as part of fire fuel management in the proposed 17.4-acre conservation open space area shall be flagged by the qualified biologist and a training performed with workers in advance of any vegetation treatment explaining that the

nest and any vegetation within 15 feet of the nest shall be left undisturbed with the exception of hand removal of any invasive species such as French broom plants or Monterey pine saplings.

Significance with Mitigation: Less than significant.

Alameda Whipsnake

The potential for presence of Alameda whipsnake within the proposed development area on the project site is considered remote for a number of reasons, including absence of suitable habitat conditions, past and ongoing disturbance as part of vegetation maintenance, and distance from known occupied habitat. However, there are currently no barriers that would prevent an individual(s) from dispersing from suitable scrub and chaparral habitat to the south. In the remote instance that an individual was dispersing through the proposed development area during construction, vegetation removal, grading, and other construction activities may result in harassment, injury, or mortality unless careful controls are taken to prevent inadvertent take of these species. Standard construction avoidance practices to prevent take include conducting preconstruction surveys, training workers on the potential presence of this species, fencing off the construction area, and monitoring the construction zone. SCA-31, *Alameda Whipsnake Protection Measures*, calls for preconstruction surveys by a qualified biologist, performance of a construction worker training program, and installation of exclusionary fencing to separate the construction site from undisturbed habitat.

Fire fuel management activities in the proposed 17.4-acre open space area on the project site (see discussion in Chapter 4.17, *Wildfire*, of this Draft EIR) could result in inadvertent harassment or take of individual Alameda whipsnake if present in the area and appropriate precautions are not taken. Routine vegetation removal to create fire breaks and reduce fuel loads at the borders of the proposed open space area, as well as periodic removal of invasive species such as French broom, cotoneaster, and pines, would introduce humans and equipment operations that could result in injury or death to an individual snake unless proper precautions are taken, including a worker training program and avoidance if a suspected snake is detected. Ultimately, the fire fuel management activities would likely serve to improve habitat conditions for Alameda whipsnake by controlling the spread of highly invasive species and maintaining important openings in otherwise dense vegetation where shrub and saplings continue to spread as a result of fire suppression in the Oakland Hills. The control of invasive species and maintenance of open areas would serve to protect native cover that could otherwise be displaced by invasive species and would provide openings in otherwise dense cover that are important as sunning locations for prey species.

Given the low-quality habitat in the 2.6-acre proposed development area and fact that the 17.4 acres of higher-quality habitat would be permanently protected as open space as part of the proposed project, no compensatory mitigation appears warranted beyond proper management of the protected open space lands. This should include control of the establishment and spread of invasive species, such as French broom, in the open space area, which could degrade the quality of habitat for Alameda whipsnake if dense stands form that shade out native species and limit basking opportunities and prey abundance.

Because Alameda whipsnake is both a State and federally threatened species, authorization from the CDFW and USFWS for any disturbance to occupied habitat or relocation of individual snakes outside the

proposed development area would be required in the remote instance one was to disperse into the construction zone. Unless one has special permit authorization from the CDFW and USFWS, no one is allowed to touch or harass an individual Alameda whipsnake if a population of this species is present on the project site. If required, authorizations would consist of an Incidental Take Permit under Section 2081 of the Fish and Game Code from the CDFW and either a Section 10 or Section 7 consultation with the USFWS under the FESA, that would include handling and relocating any individual Alameda whipsnake encountered within the proposed development area. As currently proposed, there appears to be no nexus for a federal consultation under Section 7 of the FESA, such as issuance of a permit by the USACE for impacts on regulated waters under Section 404 of the CWA.

The potential for short-term inadvertent take of Alameda whipsnake during construction of the 2.6-acre development area and subsequently during future fire fuel management activities on the proposed 17.4-acre conservation open space area is considered a potentially *significant* impact, requiring implementation of standard protection and avoidance measures, as recommended in Mitigation Measures BIO-1.4a and BIO-1.4b.

Impact BIO-1.4a: Removal of vegetative cover and other construction activities could result in the inadvertent take of Alameda whipsnake in the remote instance that an individual snake were to disperse into the proposed development area.

Mitigation Measure BIO-1.4a: Adequate measures shall be taken to avoid inadvertent take of Alameda whipsnake. This shall be accomplished through implementation of Standard Condition of Approval 31 (SCA-31), *Alameda Whipsnake Protection Measures*, together with the following provisions:

- A qualified biologist shall be retained by the applicant to oversee construction and ensure that no inadvertent take of Alameda whipsnake occurs as a result of grading and other habitat modifications to the proposed development area on the project site.
- A qualified biologist shall be retained by the applicant to oversee initial vegetation clearing and installation of wildlife exclusionary fencing to prevent Alameda whipsnake from entering the construction area. The wildlife exclusionary fencing material and design shall meet with latest standards called for by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), rather than use of plywood, as specified in SCA-31, *Alameda Whipsnake Protection Measures*, and shall include one-way funnels to allow snakes and other small wildlife to exit the fenced construction zone. The exclusionary fencing shall be maintained and remain in place for the duration of construction until the qualified biologist has determined that it is no longer needed.
- Vegetation clearing shall be performed by hand prior to installation of the wildlife exclusionary fencing to allow Alameda whipsnake to disperse from the potential development area. Vegetation removal shall be initiated from the Campus Drive frontage and proceed southward across the proposed development area. All vegetation debris shall be removed from the construction zone on a daily basis to remove any protective cover that could attract snakes and other wildlife. Operation of grading equipment shall not occur until vegetative cover has been completely removed, the entire proposed development area has been denuded and then isolated with installation of the wildlife exclusionary fencing, and the qualified biologist has performed a pre-

grading survey to confirm absence of any Alameda whipsnake within the proposed development area.

- During the construction phase of the project, the qualified biologist or on-site monitor trained by the qualified biologist, such as the construction foreman, shall check to ensure that the exclusionary fencing is intact. The fenced construction area shall be inspected by the qualified biologist or trained on-site monitor each morning and evening of construction activities for possible presence of Alameda whipsnake. This includes checking holes, under vehicles, and under boards left on the ground.
- During construction, any holes or trenches greater than six inches in depth shall be covered with plywood or similar non-heat-conductive materials, and larger trenches that cannot be readily covered shall be equipped with ramps at the end of each workday to allow escape of any animals.
- Use of monofilament plastic for erosion control or other practices shall be prohibited on the project site to prevent possible entrainment.
- All food waste shall be removed daily from the project site to avoid attracting predators.
- If any Alameda whipsnake are found within the proposed development area, construction shall be halted until they disperse naturally, and the on-site monitor shall immediately notify the qualified biologist and representatives of the USFWS and CDFW. Construction shall not proceed until adequate measures are taken to prevent dispersal of any individuals into the construction zone, as directed by the USFWS and CDFW. Subsequent recommendations made by the USFWS and CDFW necessary to avoid take of Alameda whipsnake shall be followed. Only an agency-approved biologist is allowed to handle or otherwise direct movement of Alameda whipsnake, and all others shall not handle or otherwise harass the animal(s). The qualified biologist and the on-site monitor shall be aware of all terms and conditions set by USFWS and CDFW on the project, if that becomes necessary.

Impact BIO-1.4b: Future fire fuel management activities on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) has the potential to result in the inadvertent take of the Alameda whipsnake.

Mitigation Measure BIO-1.4b1: Implement Mitigation Measure BIO-1.1a.

Mitigation Measure BIO-1.4b2: The project applicant shall retain a qualified biologist to prepare an Alameda Whipsnake Maintenance and Management Program (AWMMP) for the 17.4 acres of the project site to be provided as conservation open space shall for review and approval by the City. The AWMMP shall address annual removal of invasive species, required fire fuel management, and other activities that could affect existing habitat for Alameda whipsnake within the permanent open space area. The AWMMP shall be incorporated into the project-specific Vegetation Management Plan pursuant to Standard Condition of Approval 47(a)(ix). The AWMMP shall be prepared with input from a qualified biologist and shall include the following components:

- Maintenance and management activities shall include annual removal of invasive species, such as French broom (*Genista monspessulana*), sweet fennel (*Foeniculum vulgare*), and cotoneaster

(*Cotoneaster pannosus*), pampas grass (*Cortaderia jubata*), and poison hemlock (*Conium maculatum*), as well as sapling pines (*Pinus* spp.) with trunk diameters under 10 inches diameter at breast height, all of which are spreading through various locations on this portion of the project site and pose a threat to its future habitat quality.

- The AWMMP shall specify methods for treatment and removal, identify a schedule for annual inspection and treatment, and include triggers for retreatment when target invasive species are detected.
- All workers performing maintenance activities within the open space area shall be trained in advance by a qualified biologist over the possible presence of Alameda whipsnake, what this species looks like and its protected status, that it must not be captured or harassed, and what to do regarding avoidance if they suspect one is present in an area where vegetation management is being performed to allow the snake to disperse on its own with no disturbance.
- The AWMMP shall incorporate any requirements or controls specified by the United States Fish and Wildlife Services and/or the California Department of Fish and Wildlife as part of possible consultations with these agencies given the state and federal-listing status of Alameda whipsnake.

Significance with Mitigation: Less than significant.

BIO-2	**The proposed project would not 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 Wildlife or U.S. Fish and Wildlife Service.**

The proposed project would not have a substantial adverse effect on any sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. No direct disturbance to any sensitive natural community types is anticipated as part of the proposed project. No native grasslands, riparian woodlands or other sensitive natural community types are present in the proposed development area, and *no impacts* are anticipated.

Significance without Mitigation: No impact.

BIO-3	**The proposed project would not 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.**

The proposed project would avoid potential regulated waters, including the ephemeral creek to the south of the proposed development area. No direct disturbance to the ephemeral creek is anticipated because construction and disturbance would not occur within 90 feet from the ephemeral creek, which should be sufficient to ensure avoidance of direct and indirect impacts. The proposed project would also have to comply with SCA-58, *Creek Protection Plan*, which requires the project applicant to submit a Creek Protection Plan for review and approval by the City. The Creek Protection Plan serves to demonstrate

compliance with OMC Section 13.16.150, including best management practices both during and after construction that are necessary to protect the creek. This includes use of best management practices related to erosion, sedimentation, debris containment, and pollution control. The proposed project must also comply with SCA-57, *Vegetation Management on Creekside Properties*, which requires appropriate management of creekside vegetation prior to, during, and after construction of the project.

Appropriate controls would be implemented during construction to avoid any degradation to downgradient waters, as discussed in Chapter 4.9, *Hydrology and Water Quality,* of this Draft EIR. Given implementation of the required best management practices to control erosion and sedimentation, no direct or indirect impacts to off-site wetlands and waters are anticipated as part of proposed project implementation. This would include installation of silt fencing to prevent disturbance to the regulated waters of the southern ephemeral creek.

With implementation of relevant Oakland SCAs, the City's grading requirements, and best management practices, potential impacts on the regulated waters associated with the southern ephemeral creek would be *less than significant* and no mitigation is considered necessary.

Significance without Mitigation: Less than significant.

BIO-4	**The proposed project would not 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.**

The proposed project would not have any substantial adverse impacts on wildlife movement opportunities or adversely affect native wildlife nursery sites. During construction, smaller, less mobile wildlife species could be lost as a result of vegetation grubbing and grading within the proposed 2.6-acre development area, and larger, more mobile wildlife would be displaced to surrounding areas. However, implementation of SCA-29, *Tree Removal During Bird Breeding Season*, and SCA-31, *Alameda Whipsnake Protection Measures*, preconstruction clearance surveys, installation of temporary exclusionary fencing around the proposed development area, and worker training by a qualified biologist would serve to avoid loss of any special-status wildlife species, nesting birds, or roosting bats, as discussed under Impact Discussion BIO-1. Grading and construction would temporarily disrupt wildlife use of the immediate vicinity, but this would be a relatively short-term effect on common wildlife species. Such species would be able to continue to use the surrounding undeveloped hillside areas, including the 17.4 acres of the project site to be provided as conservation open space, for foraging and other activities. The construction-related disturbance would affect common wildlife species, affecting a relatively small portion of the project site that is already largely disturbed. The new residential development would remain permeable to wildlife once construction is completed, and replacement tree plantings and other landscaping would eventually provide habitat that could be used for dispersal, foraging, roosting, and nesting by common wildlife species associated with the proposed development area on the project site. As discussed in Chapter 3, *Project Description*, of this Draft EIR, the proposed project includes bird safety measures such as specific glazing treatments for windows and light pollution reduction measures identified in the City of Oakland Bird Safe Measures, in conformance with SCA-28, *Bird Collision Reduction Measures*. No substantial disruption of movement

corridors or access to native wildlife nursery sites is anticipated. With implementation of relevant Oakland SCAs and mitigation measures called for under Impact Discussion BIO-1, potential impacts on wildlife corridors or use of native wildlife nurseries would be *less than significant* and no mitigation is considered necessary.

Significance without Mitigation: Less than significant.

BIO-5	**The proposed project would not fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan.**

The proposed project would not conflict with any approved habitat conservation plans as none encompass the project site or surrounding area. *No impact* is anticipated, and no mitigation is considered necessary.

Significance without Mitigation: No impact.

BIO-6	**The proposed project would not fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances.**

The proposed project must comply with the City's Tree Protection Ordinance (OMC Chapter 12.36), and no fundamental conflicts are anticipated. An estimated 77 trees would be removed as recommended by the arborist to accommodate proposed grading and development, and an estimated 145 new trees would be planted in accordance with the proposed Landscaping Plan (see Figure 3-4, *Landscaping Plan,* in Chapter 3, *Project Description*, of this Draft EIR). Of the trees to be removed, 34 are coast live oak, 14 coast redwood, 25 Monterey pine, three Italian stone pine, and one willow. The proposed Landscaping Plan calls for the planting of 20 coast live oak, 13 California buckeye, ten toyon, and 50 western redbud, and the remaining 52 trees would be nonnative, low-water species.

Trees not directly removed by grading or other improvements could be damaged or adversely affected during construction or as a result of long-term changes to drainage patterns, irrigation, exposure, and other factors. Mature oaks and other trees are sensitive to changes in canopy structure, drainage patterns, soil compaction, trenching, landscape irrigation, and other modifications within the root zone. Considerable care is necessary to protect trees in the vicinity of grading, building and roadway construction, and landscape improvements. Wounding of trunks and major roots during construction is a common problem, which results in the invasion of harmful organisms and can contribute to structural decay of the tree. Root loss and a reduction in potential rooting area often contribute to long-term tree decline. In general, any disturbance within the dripline of a mature tree should be avoided to prevent adverse changes that may affect the long-term health and condition of trees to be preserved.

The PAR contains standard tree protection guidelines intended to address potential risks to trees to be retained. These include design recommendations in establishing Tree Protection Zones around each tree to be retained, preconstruction treatments, recommendations for tree protection during construction,

and maintenance of impacted trees. These tree protection guidelines are consistent with the tree protection requirements in SCA-30, *Tree Permit.* SCA-30 requires that the applicant secure a tree permit where protected trees are to be removed and abide by all conditions, that adequate tree protection be provided during construction for any trees to be retained, and that adequate replacement plantings be provided where tree removal is necessary. No replacement plantings are required for nonnative species, for the removal of trees designed to benefit the remaining trees, or where insufficient planting area exists for a mature tree of the species being considered. Replacement tree species are to consist of coast redwood, coast live oak, madrone, California buckeye, California bay, or other tree species acceptable to the Tree Division of the City. Minimum planting areas are to be provided for each replacement tree, consisting of 315 square feet for each coast redwood and 700 square feet for other species. In the event that replacement trees are required but cannot be planted due to project site constraints, an in-lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with revenues applied toward tree planting in city parks, streets, and medians.

With implementation of SCA-30, *Tree Permit*, and the required tree protections and replacements, no fundamental conflicts with the City of Oakland Tree Protection Ordinance are anticipated, and potential impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

BIO-7	**The proposed project would not fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources.**

The proposed project must comply with the City's Creek Protection Ordinance (OMC Chapter 13.16), and no fundamental conflicts are anticipated. The proposed project would avoid direct disturbance to the ephemeral creek to the south of the proposed development area, because construction and disturbance would be a minimum of 90 feet from this feature, which should be sufficient to ensure avoidance of direct and indirect impacts. No riparian vegetation would be affected, and any function the creek serves for wildlife movement would not be interrupted. The proposed project would also have to comply with SCA-57, *Vegetation management on Creekside Properties*, and SCA-58, *Creek Protection Plan.* Appropriate controls would be implemented during construction to avoid any degradation to downgradient waters, as discussed in Chapter 4.9, *Hydrology and Water Quality,* of this Draft EIR.

With implementation of relevant Oakland SCAs and required best management practices, no fundamental conflicts with the City of Oakland Creek Protection Ordinance are anticipated, and potential impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

BIO-8 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to biological resources.

The potential impacts of proposed development on biological resources tends to be site specific, and the overall cumulative effect would be dependent on the degree to which significant vegetation and wildlife resources are protected on each property. This includes preservation and replacement of regulated trees, well-developed native vegetation (native grasslands, riparian woodland, and mature oaks), populations of special-status plant or wildlife species, and wetland features (including seasonal wetlands and stream channels). Further environmental review of future development in the vicinity of the project site would ensure that important biological resources are identified, protected, and properly managed and would prevent any significant adverse development-related impacts.

To some degree, cumulative development contributes to an incremental reduction in the amount of existing wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance would be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained in parks, private open space, and undeveloped properties. Additional development may also contribute to degradation of the aquatic habitat in creeks in the area. Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality. Preparation of a Storm Water Pollution Prevention Plan required for development sites encompassing more than an acre would serve to reduce potential indirect impacts on the quality of surface water and sensitive wetland and riparian areas. Recommendations to control erosion and sedimentation after grading should serve to minimize the potential for water quality degradation associated with the proposed development of the project site and would adequately address any possible cumulative contribution to water quality degradation.

With regard to development of the project site and its relationship to surrounding habitat, the proposed project would contribute to a cumulative loss of disturbed grasslands and scrubs and an estimated 32 trees of regulated size in the Oakland Hills vicinity. Mitigation Measures BIO-1.1 through BIO-1.4 would address impacts on Oakland star tulip, the potential for nesting birds, roosting bats, nests of San Francisco dusky-footed woodrat, and the potential dispersal of Alameda whipsnake through the proposed development area. These measures would serve to salvage and re-establish the occurrences of Oakland star tulip, and would address the potential for nesting birds, roosting birds, and dispersing Alameda whipsnake. An estimated total of 145 trees would be planted as part of the proposed project's landscaping, including 20 coast live oaks, 13 California buckeye, and 50 western redbud, and with implementation of required Oakland SCAs and additional measures called for as mitigation, would serve to address the proposed project's contribution to cumulative impacts. Because over 17 acres of the higher-quality habitat on the project site would be permanently protected as part of the proposed project, together with the Oakland SCAs and proposed mitigation measures, the proposed project's contribution to cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

This chapter includes an evaluation of the potential environmental consequences related to cultural and tribal cultural resources from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing cultural and tribal cultural resources in the vicinity of the proposed project.

This chapter is based in part on the information provided in the *Cultural Resources Study for the Viewcrest Estates Project, Oakland, Alameda County, California*, prepared by Tom Origer & Associates, dated September 28, 2022. See Appendix F, *Cultural Resources Study*, of this Draft Environmental Impact Report (EIR).

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

Federal Regulations

National Register of Historic Places

The National Historic Preservation Act of 1966 established the National Register of Historic Places (National Register) as the official designation of historical resources, including districts, sites, buildings, structures and objects. For a property to be eligible for listing in the National Register, it must be significant in American history, architecture, archaeology, engineering, or culture, and must retain integrity in terms of location, design, setting, materials, workmanship, feeling and association. Resources less than 50 years in age, unless of exceptional importance, are not eligible for the National Register. Though a listing in the National Register does not prohibit demolition or alteration of a property, the California Environmental Quality Act (CEQA) requires the evaluation of project effects on properties that are listed in the National Register.

State Regulations

California Environmental Quality Act

CEQA Guidelines Section 15064.5, *Determining the Significance of Impacts to Archaeological and Historical Resources*, states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment. The CEQA Guidelines define four ways that a property can qualify as a significant historical resource for purposes of CEQA compliance:

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources (California Register), as determined by the State Historical Resources Commission.
- The resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code (PRC) or identified as significant in a historical resource survey meeting the

requirements of Section 5024.1(g) of the PRC, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- The lead agency determines the resource to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, as supported by substantial evidence in light of the whole record.
- The lead agency determines that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1 (CEQA Guidelines Section 15064.5), which means, in part, that it may be eligible for the California Register.

In addition, PRC Section 21083.2 and CEQA Guidelines Section 15126.4, *Consideration and Discussion of Alternatives to the Proposed Project*, specify lead agency responsibilities to determine whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project would damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The PRC also details required mitigation if unique archaeological resources are not preserved in place.

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These requirements and other elements of State law protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to identify the most likely descendant and mediate any disputes regarding disposition of such remains.

California Register of Historic Resources

The California Register establishes a list of properties to be protected from substantial adverse change (PRC Section 5024.1). The State Office of Historic Preservation has determined that buildings, structures, and objects 45 years or older may be of historical value. A historical resource may be listed in the California Register if it meets any of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- It is associated with the lives of persons important in California's past.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
- It has yielded or is likely to yield information important in prehistory or history.

The California Register includes properties that are listed or have been formally determined eligible for listing in the National Register, State Historical Landmarks, and eligible Points of Historical Interest. Other resources that may be eligible for the California Register, and which require nomination and approval for listing by the State Historic Resources Commission, include resources contributing to the significance of a local historic district, individual historical resources, historical resources identified in historic surveys conducted in accordance with procedures of the Office of Historic Preservation, historic resources or

districts designated under a local ordinance consistent with the procedures of the State Historic Resources Commission, and local landmarks or historic properties designated under local ordinance.

California Health and Safety Code

California Health and Safety Code Section 7050.5 requires that in the event that human remains are discovered within the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and if the coroner has reason to believe the human remains are those of a Native American, they shall contact the NAHC by telephone within 24 hours.

California Public Resources Code

Archaeological resources are protected pursuant to a wide variety of state policies and regulations enumerated under the California PRC. In addition, cultural resources are recognized as a nonrenewable resource and therefore receive protection under the California PRC and CEQA.

PRC Sections 5097.9 through 5097.991 provide protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the NAHC. The PRC also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

State Laws Pertaining to Human Remains

Any human remains encountered during ground-disturbing activities are required to be treated in accordance with California Code of Regulations Section 15064.5(e) (CEQA), PRC Section 5097.98, and the California Health and Safety Code Section 7050.5. California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Specifically, Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are determined to be of Native American origin, the county coroner must contact the California NAHC within 24 hours of this identification. An NAHC representative will then identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. In addition, CEQA Guidelines Section 15064.5 specifies the procedures to be followed in case of the discovery of human remains on nonfederal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Native American Historic Resource Protection Act

The Native American Historic Resource Protection Act, formally known as Assembly Bill 52, added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources (TCRs) under CEQA and consultation requirements with California Native American tribes. The act requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with a proposed project's geographic area, if they have requested to be notified, in order to include California tribes in determining if a project may result in significant impacts to TCRs. TCRs may be undocumented or known only to the tribe. The act defines a TCR as a site, feature, place, or a cultural landscape that is geographically defined in terms of size and scope, sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register or included in a local register of historical resources, or that the lead agency chooses at its discretion to treat as a TCR. When a lead agency chooses to treat a resource as a TCR, that determination shall be supported with substantial evidence, applying the criteria in the historical register and considering the significance of the resource to a California tribe. A project that may cause substantial adverse change in the significance of a TCR is one that may have a significant effect on the environment.

Consultation with California tribes may include, but is not limited to, discussion of the type of environmental review necessary, the significance of TCRs, the significance of the proposed project impacts on the TCRs, and alternatives and mitigation measures recommended by the tribe. Agreed-upon mitigation measures must be included in the environmental document. Consultation is considered concluded when the parties agree to measures to avoid or reduce a significant impact on a TCR, or when a party concludes that mutual agreement cannot be reached. If no formal agreement on the appropriate mitigation has been established, mitigation measures that avoid or substantially lessen potential significant impacts should be implemented.

Local Regulations

Oakland General Plan

The Oakland General Plan Historic Preservation Element addresses preservation and enhancement of Oakland's older buildings, districts, and other physical environmental features having special historic, cultural, educational, architectural, or aesthetic interest or value. Policies applicable to the proposed project related to cultural resources are outlined in Table 4.4-1, *Oakland General Plan Policies Relevant to Cultural Resources and the Proposed Project*.

TABLE 4.4-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO CULTURAL RESOURCES AND THE PROPOSED PROJECT

Policy No.	Text
Historic Preservation Element	
4.1	**Archeological Resources.** To protect significant archaeological resources, the City will take special measures for discretionary projects involving ground disturbances located in archaeologically sensitive areas.

Source: City of Oakland, July 1998, *City of Oakland General Plan*, *Historic Preservation Element*.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCAs are related to cultural and historic resources and are applicable to the proposed project:

- SCA-32. Archaeological and Paleontological Resources – Discovery During Construction: 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-34. Human Remains – Discovery During Construction: 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.

4.4.1.2 EXISTING CONDITIONS

As previously described, a cultural resources study was prepared by Tom Origer & Associates and is included in Appendix F, *Cultural Resources Study*, of this Draft EIR. The cultural resource study included archival research at the Northwest Information Center, Sonoma State University; examination of the library and files of Tom Origer & Associates; Native American contact; and field inspection of the 2.6-acre proposed development area. In addition, a mining feature within the 17.4-acre conservation open space area that is not subject to development was evaluated for inclusion in the California Register of Historical Resources.

An intensive field survey on the proposed development area was completed by Vicki Beard of Tom Origer & Associates on November 4, 2020. Due to the steepness of the 2.6-acre proposed development area, 20-meter survey transects were employed in most areas; where slopes were gentle, the interval between transects was reduced to 10 meters. A hoe was used to expose the ground surface when needed. Ground visibility was generally poor, with dense vegetation being the chief hindrance.

Archival research found that the 20-acre project site has been subjected to two previous cultural resources studies. In 2015, six exploration trenches from construction companies and/or quarriers speculating for materials were identified at the south end of the proposed development area and documented. No other resources are recorded within the 20-acre project site. Additionally, two cultural resources surveys have been conducted within 0.25 miles of the proposed development area. No resources have been documented within 0.25 miles of the proposed development area. A review of 19th-century and early 20th-century maps found no buildings depicted in the proposed development area. A concrete-lined ditch was constructed in the proposed development area between 1980 and 1993. There are no reported ethnographic[1] sites within 0.25 miles of the proposed development area.

The following summarizes the findings of the cultural resources study and describes the proposed development area, the historic and archaeological resources on the site and in the project vicinity, and the outreach to the Native American Heritage Commission and Native American tribes.

[1] Ethnography is a descriptive study of a particular human society or the process of making such a study.

Project Location and Physical Setting

The project site is in the eastern hills of Oakland in Alameda County, which is in the East Bay region of the San Francisco Bay Area. The nearest fresh water source to the project site is Chimes Creek, a seasonal stream approximately 670 feet (0.10 miles) southwest of the study area. The geology of the study area consists of keratophyre and quartz keratophyre (formerly known as Leona Rhyolite), thought to be altered remnants of a volcanic arc deposited during the late Jurassic Period (145 to 200 million years ago). Soils in the study area belong to the Maymen series. Maymen soils are shallow, somewhat excessively draining loams found on slopes of 30 to 75 percent.

Historic Resources

The hills east of Oakland hosted a variety of mining pursuits beginning in the 1890s and continuing through the 20th century. Minerals found near the project site included copper, silver, gold, and pyrite, which were extracted from mines at Leona Heights. By the turn of the 20th century, aggregate mining became dominant, with the E.B. Stone Company extracting rock from the Leona Heights Quarry for use in construction projects. The quarry southeast of the project site, known as the Leona Quarry, began operations circa 1906, with the Ransome-Crummey Company mining aggregate for use in concrete buildings, and roads. Owned by several construction companies over the years, including Ransome Company, Heafy-Moore Co., and Gallagher & Burke Inc., the Leona Quarry supplied construction material in the form of crushed rock, used primarily for the construction of roads. Earlier, the material would have been used to construct macadam roads. Macadam roads were constructed by laying down layers of rocks in decreasing size until the top layer was a layer of dust. Each layer would be rolled with a heavy roller to ensure that the layers were well compacted. Once all of the layers were laid and compacted, the dust was covered with either water or bitumen. Crushed rock continues to be used today for a wide variety of construction uses, so the quarry remained in the hands of construction companies who utilized it for a variety of projects. The quarry was closed in the early 2000s and was developed into residential units. The exploration trenches on the south end of the proposed development area are evidence of construction companies and quarries speculating for materials. Based on examination of aerial photos, these trenches were created sometime between 1940 and 1958. While this time period corresponds with an increased population in the San Francisco Bay Area, there were no additional quarries being developed or shuttered quarries being reopened at the time, suggesting that these exploration trenches could be Gallagher & Burke's attempt to expand the Leona Quarry. The exploration trenches do not meet the criteria to be listed in the California Register.

Archaeological Resources

Based on landform age, analysis of the environmental setting, and incorporation of the model for predicting a location's sensitivity for buried sites, the project site has a low potential for buried archaeological site indicators. This is because the project site is on a steep slope, is not close to a source of fresh water, and is on a Late Jurassic landform dating from about 163.5 to 145 million years ago, well before human occupation of the area.

No prehistoric archaeological site indicators were observed during the survey conducted for the project. Five of the six previously recorded exploration trenches were observed during the survey. These features

consist of open-ended trenches cut into the slope of the hill in roughly a northwesterly direction. The margins are rounded, giving them an oblong, bowl-like appearance. The largest measures 48 by 21 feet and is about 10 feet deep. The exploration trenches are now revegetated, and oak and pine trees are growing in some of the concavities.

Tribal Cultural Resources

There are no known tribal cultural resources on the project site, and none were identified as part of the field survey conducted for the site. While no Native American tribes have requested that the City of Oakland provide, in writing, notification of projects in the tribe's area of traditional and cultural affiliation pursuant to PRC Section 21080.3.1, which amended CEQA pursuant to the Native American Historic Resource Protection Act, the City of Oakland and Tom Origer & Associates contacted the NAHC seeking the names of Native American individuals and groups that would be appropriate to contact regarding the proposed project. A total of 11 local Native American representatives were identified as potentially having local knowledge. A representative of each the following tribes was sent a letter requesting information about potential resources at or near the project site (see Appendix F, *Cultural Resources Study*, of this Draft EIR):

- Amah Mutsun Tribal Band
- Amah Mutsun Tribal Band of Mission San Juan Bautista
- The Confederated Villages of Lisjan
- Costanoan Rumsen Carmel Tribe
- Guidiville Indian Rancheria
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- North Valley Yokuts Tribe
- The Ohlone Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band

Though no responses were received at the time of publication of this Draft EIR, the City remains open to consultation with tribal representatives. Additionally, staff from Tom Origer & Associates requested information from the NAHC Sacred Lands File. A sacred lands file search by the NAHC for the project site returned with negative results—that is, the search did not identify any sacred lands.

Paleontological and Unique Geological Resources

The property itself sits atop late Jurassic Leona rhyolite of the Coast Range Ophiolite Complex, as shown on Figure 4.6-2, *Geology Map,* in Chapter 4.6, *Geology and Soils*, of this Draft EIR. Coast Range Ophiolite is a geological formation that consists of "plutonic rocks of the upper mantle, basaltic volcanic rocks of the ocean crust, rocks transitional between the mantle and crust rocks, and metamorphosed upper mantle rock…."[2] This formation is highly metamorphosed and does not contain intact sedimentary rocks, which can, in turn, contain fossils. Based on this information, the potential for encountering paleontological resources in the project site is considered low.

Each rock unit tells a story of the natural processes operating at the time it was formed. The rocks and geologic formations exposed at the earth's surface or revealed by drilling and excavation are our only record of that geologic history. What makes a geologic unit or feature unique can vary considerably. For

[2] Doris Sloan, 2006, *California natural History Guides: Geology of the San Francisco Bay Region*

example, a geologic feature may be considered unique if it is the best example of its kind and has distinctive characteristics of a geologic principle that is exclusive locally or regionally; is a key piece of geologic information important to geologic history; contains a mineral that is not known to occur elsewhere in the county; or is used as a teaching tool. Unique geological features are not common in Oakland. The geologic processes are generally the same as in other parts of the state, country, and even the world. The geology and soils on the project site are common throughout the city and region and are not considered unique.

4.4.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant cultural and tribal resources impact if it would:

1. 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 Historical Resources, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5).
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
4. Disturb any human remains, including those interred outside of formal cemeteries.
5. Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: (i) Listed or eligible for listing in the California; (ii) Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or (iii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.
6. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to cultural or tribal cultural resources.

4.4.3 IMPACT DISCUSSION

CUL-1 The proposed project would not cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5.

The types of cultural resources that meet the definition of historical resources under CEQA generally consist of districts, sites, buildings, structures, and objects that are significant for their traditional, cultural, and/or historical associations. Under CEQA, both prehistoric and historic-period archaeological sites may qualify based on historical associations. As such, the two main historical resources that are subject to impact and that may be impacted by implementation of the proposed project are historical archaeological deposits and historical architectural resources. Impacts to archaeological resources are described in Impact Discussion CUL-2, and human remains are addressed in Impact Discussion CUL-3.

As described in Section 4.4.1.2, *Existing Conditions,* past uses of the project site and the surrounding area involve mining, and there is a quarry southeast of the project site, known as the Leona Quarry, that began operations circa 1906, with the Ransome-Crummey Company mining aggregate for use in concrete buildings and roads.

The site is undeveloped, and the Oakland General Plan does not identify the project site as a historic resource.[3] Archival research conducted by Tom Origer & Associates found that a 2015 cultural resources study of the project site identified and documented six exploration trenches at the south end of the project site. These mining features were evaluated for inclusion in the California Register but were found ineligible. Therefore, the proposed project would have *no impact* on historical resources.

Significance without Mitigation: No impact.

CUL-2 The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.

As discussed in Section 4.4.1.2, *Existing Conditions*, based the model for predicting a location's sensitivity for buried sites, the project site has a low potential for buried archaeological site indicators due to its steep slope, location, and landform age. Furthermore, no prehistoric archaeological site indicators were observed during the field survey conducted by Tom Origer & Associates.

Although no known archaeological resources have been recorded at the project site, ground-disturbing construction activities (e.g., site preparation, grading, excavation, and trenching for utilities) associated with the proposed project may result in unanticipated discoveries of cultural resources or the damage or destruction of previously undiscovered resources. The proposed project would be mandated to adhere to SCA-32 which requires all work within 50 feet of the resources be halted in the case archeological

[3] City of Oakland, July 1998, *City of Oakland General Plan*, *Historic Preservation Element*.

resources are uncovered. The project applicant is to notify the City and consult with a qualified archaeologist to assess the significance of the find. Compliance with the regulations listed in Section 4.4.1.1, *Regulatory Framework*, including SCA-32, would ensure that impacts to archeological resources would be *less than significant.*

Significance without Mitigation: Less than significant.

CUL-3 The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As described in Section 4.1.1.2, *Existing Conditions,* the geology and soils on the project site are common throughout the city and region and not considered unique. Therefore, there would be no impact with respect to a unique geologic feature. Also described in Section 4.1.1.2, due to the Coast Range Ophiolite, a geological formation that does not contain intact sedimentary rocks that can hold fossils, the probability of unearthing a paleontological resource is low. Nonetheless, because the proposed project requires ground-disturbing activities, there could be fossils of potential scientific significance that are not recorded. Such ground-disturbing construction associated with development permitted under the proposed project could cause damage to or destruction of paleontological resources.

As described under Impact Discussion CUL-2, the proposed project would be required to adhere to SCA-32, *Archaeological and Paleontological Resources – Discovery During Construction.* In the event paleontological resources are uncovered, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified paleontologist to assess the significance of the find. Compliance with the regulations listed in Section 4.4.1.1, *Regulatory Framework*, including SCA-32, would ensure that impacts to paleontological resources would be *less than significant.*

Significance without Mitigation: Less than significant.

CUL-4 The proposed project would not disturb any human remains, including those interred outside of formal cemeteries.

Previously undiscovered human remains associated with pre-contact archaeological deposits may exist within the project site, and ground-disturbing activities sometimes uncover such previously unrecorded remains. As discussed under Impact Discussion CUL-2, ground-disturbing activities and excavation for the proposed project would have the potential to uncover buried resources. It is possible that human remains may be present on the project site. The proposed project would be mandated to comply with SCA-34, *Human Remains – Discovery During Construction*, which would halt all ground-disturbing activities within 50 feet of resources if human remains are uncovered during construction and require the project applicant to notify the City and the Alameda County Coroner. Compliance with the regulations listed in Section 4.4.1.1, *Regulatory Framework*, including SCA-34, would ensure that impacts to human remains would be *less than significant.*

Significance without Mitigation: Less than significant.

CUL-5	**Implementation of the proposed project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: (i) Listed or eligible for listing in the California; (ii) Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or (iii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.**

As discussed in Section 4.4.1.2, *Existing Conditions*, a sacred lands file search conducted by the NAHC for the project site did not identify any sacred lands. Furthermore, the City initiated the consultation process under the Native American Historic Resource Protection Act, as recommended by the NAHC, by contacting the NAHC-provided list of local tribal representatives by letter, inviting them to initiate consultation. The purpose of the letters was to inform nearby tribes of the proposed project. As of publication of this Draft EIR, no responses have been received from the tribes. In addition to the negative results of the sacred lands file record search and the contact letters, the federal, State, and City historic registers do not indicate any site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe designated on the project site. As discussed under Impact Discussion CUL-1, the project site is not listed in the Historic Preservation Element of the Oakland General Plan.

However, it is still possible that a currently unknown tribal cultural resource could be encountered during construction activities. The proposed project would be mandated to adhere to SCA-32, *Archaeological and Paleontological Resources – Discovery During Construction,* and SCA-34, *Human Remains – Discovery During Construction.* 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 event that human 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 the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made and the City shall contact the California NAHC, pursuant to subdivision (c) of Section 7050.5 of the California Health and Safety Code. Compliance with the regulations in Section 4.4.1.1, *Regulatory Framework*, including SCA-32 and SCA-34, would ensure that impacts to tribal cultural resources would be *less than significant.*

Significance without Mitigation: Less than significant.

CUL-6 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to cultural or tribal cultural resources.

Cumulative cultural resource impacts would occur when a series of actions leads to the loss of a substantial type of site, building, or resource. For example, while the loss of a single historic building may not be significant to the character of a neighborhood or streetscape, continued loss of such resources on a project-by-project basis could constitute a significant cumulative effect. This is most obvious in historic districts, where destruction or alteration of a percentage of the contributing elements may lead to a loss of integrity for the district overall. For example, changes to the setting or atmosphere of an area by adding modern structures on all sides of a historically significant building, thus altering the aesthetics of the streetscape, would create a significant impact. Destruction or relocation of historic buildings would also significantly impact the setting.

The project site does not contain any designated historic resources. As there are no significant historic structures and no known archaeological resources, paleontological resources, or human remains on the project site, development of the proposed project would not create or contribute to a cumulative impact to cultural resources. Compliance with Oakland SCAs would ensure that any buried archaeological resources or any potential human, if encountered, would be properly handled. Additionally, the existing federal, State, and local regulations and policies listed in Section 4.4.1.1, *Regulatory Framework*, serve to protect any as-yet-undiscovered cultural resources. Continued compliance with existing policies and requirements would preclude cumulative impacts to the maximum extent practicable. Therefore, the proposed project would result in a *less-than-significant* cumulative impact with respect to all cultural resources.

Significance without Mitigation: Less than significant.

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4.5 ENERGY

This chapter includes an evaluation of the potential environmental consequences related to energy from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing energy usage in the vicinity of the proposed project.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 REGULATORY FRAMEWORK

Federal Regulations

Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of United States crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. The CAFE standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025 that required a fleet average of 54.5 miles per gallon (MPG) for model year 2025. However, on March 30, 2020, the United States Environmental Protection Agency (USEPA) finalized an updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 through 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 MPG for model year 2026 vehicles. On March 31, 2022, the National Highway Traffic Safety Administration finalized new fuel standards, which will increase fuel efficiency 8 percent annually for model years 2024 to 2025 and 10 percent annually for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which will be a 10 MPG increase relative to model year 2021.[1]

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The act sets increased CAFE

[1] National Highway Traffic Safety Administration, April 1, 2022, USDOT Announces New Vehicle Fuel Economy Standards for Model year 2024-2026, https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026, accessed October 24, 2022.

Standards; the Renewable Fuel Standard; appliance energy-efficiency standards; building energy-efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration.[2]

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. The Energy Policy Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

Natural Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

State Regulations

California Energy Commission

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and the latest update was in January 2022.

[2] United States Environmental Protection Agency, updated May 12, 2022, Summary of the Energy Independence and Security Act, https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act, accessed October 24, 2022.

California Public Utilities Commission

In September 2008, the California Public Utilities Commission (CPUC) adopted the Long-Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. The plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy (ZNE) by 2020;
- All new commercial construction in California will be ZNE by 2030;
- Heating, ventilation, and air conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and
- All eligible low-income customers will be given the opportunity to participate in the low-income energy-efficiency program by 2020.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the state's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of the state's electricity and gas use.

The CPUC and CEC have adopted the following goals to achieve ZNE levels by 2030 in the commercial sector:

- Goal 1: New construction will increasingly embrace ZNE performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- Goal 2: 50 percent of existing buildings will be retrofit to ZNE by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- Goal 3: Transform the commercial lighting market through technological advancement and innovative utility initiatives.

Renewable Portfolio Standard

Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08

The California Renewables Portfolio Standard (RPS) Program was established in 2002 under Senate Bill (SB) 1078 and SB 107. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. Initially under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent to reach at least 20 percent by December 30, 2010. Executive Order (EO) S-14-08 was signed in November 2008, which expanded the State's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted

by the legislature in 2011 (SB X1-2). The CPUC is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the state. For year 2020, the three largest retail energy utilities provided an average of 43 percent of its supplies from renewable energy sources. Community choice aggregators provided an average of 41 percent of its supplies from renewable sources.[3]

Senate Bill 350

SB 350 was signed into law on October 7, 2015, to expand the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy-efficiency savings in electricity and natural gas final end uses—such as heating, cooling, lighting, or class of energy uses upon which an energy-efficiency program is focused—of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

Senate Bill 100

On September 10, 2018, SB 100 was signed into law, which replaces the SB 350 requirements. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 established a new RPS requirement of 50 percent by 2026 and an overall State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under SB 100, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Senate Bill 1020

SB 1020 was signed into law on September 16, 2022; provides interim RPS targets (90 percent renewable energy by 2035 and 95 percent renewable energy by 2040); and requires renewable energy and zero-carbon resources to reach 100 percent clean electricity for all retail sales by 2045. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

[3] California Public Utilities Commission, May 2021, *2021 Padilla Report: Costs and Savings for the RPS Program (Public Utilities Code Section 913.3)*, https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/energy/rps/2021-padilla-report_final.pdf, accessed October 24, 2022.

Assembly Bill 117 and Senate Bill 790

Community Choice Aggregation is a program that allows cities, counties, and other qualifying governmental entities within the service areas of investor-owned utilities to purchase and/or generate electricity for their residents and businesses. This program was made possible in California by passage of Assembly Bill (AB) 117 and SB 790. AB 117 established Community Choice, and SB 790 strengthened it by creating a "code of conduct" that the incumbent utilities must adhere to in their activities relative to Community Choice.

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations [CCR] Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy-efficiency technologies and methods.[4]

Title 24, Part 6, Energy-Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2021 (24 CCR Part 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy-efficiency technologies and methods.

On August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards become effective and replace the existing 2019 standards on January 1, 2023. The 2022 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings, such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.[5]

Title 24, Part 11, Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. It includes mandatory requirements for new

[4] California Energy Commission, January 2017, *2016 Appliance Efficiency Regulations*, https://pdf4pro.com/cdn/2016-appliance-efficiency-regulations-5104f7.pdf, accessed October 24, 2022.

[5] California Energy Commission, August 2022, *2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings*, https://www.energy.ca.gov/sites/default/files/2022-08/CEC-400-2022-010_CMF.pdf, accessed October 24, 2022.

residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. The mandatory provisions of CALGreen became effective January 1, 2011. The 2022 CALGreen update became effective on January 1, 2023, with updates to the residential and nonresidential voluntary measures.

Overall, CALGreen was established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. It provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. CALGreen also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.[6]

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduced GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and was anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the USEPA. In 2012, the USEPA issued a Final Rule that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles (see also the discussion on the update to the CAFE standards under *Federal Regulations*, above). In January 2012, the California Air Resources Board (CARB) approved the Pavley Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles (ZEVs) into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions. In August 2022, CARB approved the new Advanced Clean Cars II standards that will ensure all new passenger cars, trucks, and sport utility vehicles sold in the state will be ZEVs by 2035. The Advanced Clean Cars II standards will amend the Zero-Emission Vehicle Regulation to require an increase in ZEVs and amends the Low-Emission Vehicle Regulations to include more stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions.[7]

Title 13, Section 2449

Section 2449 of 13 CCR Article 4.8, Chapter 9, was adopted on May 2, 2008, and limits unessential idling of fleets to no more than five consecutive minutes at any location. This idling restriction applies to all

[6] California Building Standards Commission, July 2019, *2019 California Green Building Standards Code*, https://codes.iccsafe.org/content/CAGBSC2019/cover, accessed October 24, 2022.

[7] California Air Resources Board, 2022, Advanced Clean Cars Program, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about, accessed October 24, 2022.

vehicles in California with a diesel-fueled or alternative diesel-fueled off-road engine, unless a waiver provides sufficient justification that such idling is necessary. The airborne toxic control measure helps reduce public exposure to oxides of nitrogen (NO_X), diesel particulate matter (PM), and other criteria pollutant emissions from off-road diesel-fueled vehicles.

Executive Order N-79-20

On September 23, 2020, EO N-79-20 was issued, which sets a time frame for the transition to zero-emissions (ZE) passenger vehicles and trucks, in addition to off-road equipment. It directs CARB to develop and propose the following:

- Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in California toward the target of 100 percent of in-state sales by 2035.
- Medium- and heavy-duty vehicle regulations requiring increasing volumes of new ZE trucks and buses sold and operated in California toward the target of 100 percent of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be ZE by 2035.
- Strategies to achieve 100 percent ZE from all off-road vehicles and equipment operations in California by 2035, in cooperation with other State agencies, the USEPA, and local air districts.

On August 25, 2022, CARB adopted the Advanced Clean Cars II regulations that codifies the EO goal of 100 percent of in-state sales of new passenger vehicles and trucks be ZE by 2035. Starting in year 2026, Advanced Clean Cars II requires that 35 percent of new vehicles sold be ZE or plug-in hybrids.

Green Building Executive Order S-20-04

In 2004, EO S-20-04 was signed into law, committing the State to take aggressive action to reduce building electricity usage by retrofitting, building, and operating the most energy- and resource-efficient buildings by taking all cost-effective measures described in the Green Building Action Plan for facilities owned, funded, or leased by the State and to encourage cities, counties, and schools to do the same. It also calls for State agencies, departments, and other entities under the direct executive authority of the Governor to cooperate in taking measures to reduce grid-based energy purchases for State-owned buildings by 20 percent by 2015, through cost-effective efficiency measures and distributed generation technologies. These measures should include, but are not limited to:

- Designing, constructing, and operating all new and renovated State-owned facilities paid for with State funds as "Leadership in Energy and Environmental Design (LEED) Silver" or higher certified buildings.
- Identifying the most appropriate financing and project delivery mechanisms to achieve these goals;
- Seeking out office space leases in buildings with a USEPA Energy Star rating.
- Purchasing or operating Energy Star electrical equipment whenever cost-effective.

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions-reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty

trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions-reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Association of Bay Area Governments (ABAG) is the MPO for the Bay Area region, which includes the City of Oakland. Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

Regional Regulations

Metropolitan Transportation Commission (MTC) and ABAG adopted *Plan Bay Area 2050* on October 21, 2021.[8] *Plan Bay Area 2050* provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Under the *Plan Bay Area 2050* strategies, just under half of all Bay Area households would live within 0.5 miles of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19 percent reduction in per capita emissions by 2035—but only if all strategies are implemented.

To achieve MTC's/ABAG's sustainable vision for the Bay Area, the *Plan Bay Area* land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas in existing communities. An overarching goal of the regional plan is to concentrate development in areas with existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. The proposed project, though within 0.4 miles of the nearest bus stop at Merritt College, is not in an identified PDA.[9]

Local Regulations

Oakland General Plan

Chapter 3, *Conservation*, of the Oakland General Plan Open Space, Conservation, and Recreation Element, addresses conservation, development, and use of Oakland's natural resources, including energy. In addition, other elements of the Oakland General Plan, including the Land Use and Transportation Element

[8] Association of Bay Area Governments and the Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed October 24, 2022.

[9] Metropolitan Transportation Commission, updated July 2020, Priority Development Areas (Plan Bay Area 2050), https://opendata.mtc.ca.gov/datasets/priority-development-areas-plan-bay-area-2050, accessed October 24, 2022.

and the Housing Element, also include policies and guidelines relating to energy. These are outlined in Table 4.5-1, *Oakland General Plan Policies Relevant to Energy and the Proposed Project*.

TABLE 4.5-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO ENERGY AND THE PROPOSED PROJECT

Policy No.	Text
Open Space, Conservation, and Recreation Element	
CO-13.1	**Reliable Energy Network.** Promote a reliable local energy network which meets future needs and long-term economic development objectives at the lowest practical cost.
CO-13.2	**Energy Efficiency.** Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.
CO-13.3	**Construction Methods and Materials.** Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximizes energy efficiency.
CO-13.4	**Alternative Energy Sources.** Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.
Land Use and Transportation Element	
T1.2	**Improving Transportation Links.** Improve all types of transportation links including the Air BART shuttle service, between the Airport and business and neighborhood activity centers and the City.
T2.1	**Encourage Transit-Oriented Development.** Transit-oriented development should be encouraged at existing or proposed transit nodes, defined by the convergence of two or more modes of public transit such as BART, bus, shuttle service, light rail or electric trolley, ferry, and inter-city or commuter rail.
T2.2	**Guiding Transit-Oriented Development. Transit**-oriented developments should be pedestrian oriented, encourage night and day time use, provide the neighborhood with needed goods and services, contain a mix of land uses, and be designed to be compatible with the character of surrounding neighborhoods.
Housing Element	
7.1	**Sustainable Residential Development Programs.** In conjunction with the City's adopted Energy and Climate Action Plan (ECAP), develop and promote programs to foster the incorporation of sustainable design principles, energy efficiency and smart growth principles into residential developments. Offer education and technical assistance regarding sustainable development to project applicants.
7.2	**Minimize Energy Consumption.** Encourage the incorporation of energy conservation design features in existing and future residential development beyond minimum standards required by State building code.

Source: City of Oakland, *City of Oakland General Plan*, *Open Space, Conservation, and Recreation Element* (June 1996), *Land Use and Transportation Element* (March 1998), and *Housing Element* (December 2014).

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to energy resources in Oakland. Chapter 15.33, *Residential Rooftop Solar Requirements*, includes regulations to adopt an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 (Chapter 521, Statutes 2014). Section 15.33.070, *Requirements*, establishes the requirements for solar energy systems imposed by State and local law for residential rooftops. Chapter 15.35, *Green Building Requirements for City Buildings Projects and Traditional Public Work Projects,* sets out the criteria for the integration of green building strategies in public City buildings and traditional public works projects. Section 15.35.046*, Promoting green building practices in the private development projects*, promotes the use of green building strategies in private development projects in the city by offering various incentives, such as free green building technical assistance and grants.

Chapter 15.37, *All-Electric Construction in Newly Constructed Buildings*, sets forth the requirements for new buildings to use a permanent supply of electricity as the source of energy for all space heating, water heating (including pools and spas), cooking appliances, and clothes drying appliances, and has no natural gas or propane plumbing installed in the building. Section 15.37.030, *Requirement for all-electric construction in newly constructed buildings,* describes the specific requirements for new buildings.

OMC Chapter 18.02, *Sustainable Green Building Requirements for Private Development*, is intended to promote economic development and enhance the welfare of city occupants through integration of environmentally sustainable strategies in building construction and landscapes and sets standards to minimize the use of natural resources and production of waste. OMC Chapter 15.04, *Oakland Amendments to California Model Building Construction Codes*, adopts the 2019 California Building Energy Efficiency Standards (Title 24, Part 6) of the California Building Code with amendments.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCAs are related to energy use and conservation and are applicable to the proposed project:

- SCA-41. Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist: 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.
  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.

- SCA-81. Plug-In Electric Vehicle (PEV) Charging Infrastructure: The applicant shall submit, for review and approval of the Building Official and the Zoning Manager, plans that show the location of parking spaces equipped with full electrical circuits designated for future PEV charging (i.e., "PEV-Ready) per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-Ready parking spaces.

- SCA-85. Green Building Requirements:
  a) Compliance with Green Building Requirements During Plan-Check: The project shall comply with the requirements of the Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code).

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

ii. The set of plans in subsection (i) shall demonstrate compliance with the following:
   - CALGreen mandatory measures.
   - Minimum of 23 points (3 Community, 6 IAQ/Health, 6 Resources, 8 Water).
   - All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted.
   - The required green building point minimums in the appropriate credit categories.

b) Compliance with Green Building Requirements During Construction: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. The following information shall be submitted to the City for review and approval:
   i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.
   ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.
   iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

c) Compliance with Green Building Requirements After Construction: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.

2030 Equitable Climate Action Plan

The City of Oakland's *2030 Equitable Climate Action Plan* (ECAP), released July 2020, lays out a plan for the City of Oakland to reduce GHG emissions a minimum of 56 percent by 2030.[10] Actions concerning building sustainability include eliminating natural gas in new buildings and planning for all existing buildings to be efficient and all-electric by 2040. In addition, actions concerning adaptation include enhancing community energy resilience through installation of renewable energy and onsite energy storage and including energy-efficiency building upgrades in related programs, leveraging local and regional incentives.

4.5.1.2 EXISTING CONDITIONS

Energy Providers

Pacific Gas and Electric Company

PG&E is a publicly traded utility company that generates, purchases, and transmits energy under contract with the CPUC. Its service territory is 70,000 square miles in area, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada range to the Pacific Ocean. The electricity distribution system of PG&E consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines. PG&E owns and maintains above- and belowground networks of electric and gas transmission and distribution facilities throughout Oakland and in the vicinity of the project site. As stated, PG&E still delivers electricity and natural gas services to the city, although the City recently shifted to energy provider EBCE. Both gas and electrical service are available at the project site; however, only electrical service is required for the all-electric project.

PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydroelectric dams as well as newer sources of energy, such as wind turbines and photovoltaic plants or "solar farms." "The Grid," or bulk electric grid, is a network of high-voltage transmission lines, linked to power plants within the PG&E system. The distribution system, composed of lower-voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

East Bay Community Energy

In 2018, Alameda County and a number of its member cities, including Oakland, shifted its default electricity supplier to a local Community Choice Energy program, East Bay Community Energy (EBCE). EBCE was formed as a Joint Powers Authority and operates as a not-for-profit public agency. EBCE offers three program options: the Renewable 100 program, which uses 100 percent eligible renewable energy from California solar and wind power; the Brilliant 100 program, which uses 45 percent eligible renewable power and is 100 percent carbon-free with the use of hydroelectric power; and the Bright Choice program, which uses 41 percent eligible renewable power and is 62 percent carbon-free with the use of

[10] City of Oakland, July 2020, *Oakland 2030: Equitable Climate Action Plan*, https://cao-94612.s3.amazonaws.com/documents/Oakland-ECAP-07-24.pdf, accessed October 24, 2022.

hydroelectric power.[11] Through a partnership with PG&E, the electric energy provided by EBCE is conveyed to customers through PG&E's existing infrastructure. PG&E continues to maintain the grid, repair lines, and conduct customer billing within the EBCE service area.

The nearest PG&E substation to the project site is Palo Seco on Monterey Boulevard, approximately three miles northwest of the project site. The nearest electricity transmission lines are north of the project site along Shepherd Canyon Road.[12]

Existing Energy Use

The existing project site is undeveloped and does not currently use energy. However, the areas surrounding the project site are developed with primarily residential uses and are therefore connected to existing electricity and natural gas distribution systems.

4.5.2 STANDARDS OF SIGNIFICANCE

According to the California Environmental Quality Act (CEQA) Guidelines Appendix G, *Environmental Checklist*, the proposed project would result in a significant energy impact if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
3. 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.
4. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to energy.

[11] East Bay Community Energy, 2022, Our Power Mix, https://ebce.org/our-power-mix/, accessed October 24, 2022.

[12] California Energy Commission, updated November 2021, California Electric Transmission Lines, https://tpc.maps.arcgis.com/home/item.html?id=260b4513acdb4a3a8e4d64e69fc84fee, accessed October 6, 2022.

4.5.3 IMPACT DISCUSSION

ENE-1	**The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.**

Short-Term Construction Impacts

Construction of the proposed project would create temporary increased demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation-related energy use. Construction activities use energy from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, motor vehicles transporting the construction crew, and smaller hand-held electric equipment such are power drills, table saws, and compressors.

Electrical Energy

Construction of the proposed project on the 2.6-acre development area would not require electricity to power most construction equipment. Electricity use during construction would vary during different phases of construction. The majority of construction equipment during grading would be gas or diesel powered, and later construction phases would primarily require electric-powered equipment for interior construction and architectural coatings. It is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities. Overall, the use of electricity would be temporary, would fluctuate according to the phase of construction, and would not represent wasteful or unnecessary use of electricity.

Natural Gas Energy

It is not anticipated that construction equipment used for the proposed project would be powered by natural gas; therefore, no natural gas demand is anticipated during construction.

Liquid Fuels and Transportation Energy

Transportation energy use depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would be temporary and would fluctuate according to the phase of construction. It is anticipated that the majority of off-road construction equipment, such as those used during grading, would be gas or diesel powered.

Use of construction equipment would cease upon completion of the proposed development. Thus, impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Furthermore, to limit

wasteful and unnecessary energy consumption, the construction contractors would minimize nonessential idling of equipment during construction, in accordance with Section 2449 of 33 CCR Article 4.8, Chapter 9. Furthermore, while written as an air pollution control measure, as described in Chapter 4.2, *Air Quality,* of this Draft EIR, SCA-21, *Criteria Air Pollutant Controls–Construction Related,* also includes requirements that restrict idling times, which further ensures energy efficiency from construction equipment.

Construction trips would not result in unnecessary use of energy because the project site is served by numerous regional roadways (e.g., Interstate 580) that provide direct routes from various areas in the region. Moreover, electrical energy would be available for use during construction from existing power lines and connections, either precluding or minimizing the use of less-efficient liquid-fueled generators. Thus, energy use during construction of the project would not be considered inefficient, wasteful, or unnecessary.

Long-Term Operation Impacts

Operation of the proposed project would create additional demands for electricity compared to existing conditions and would result in increased transportation energy use. Operational use of energy would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; use of on-site equipment and appliances; landscaping equipment; and indoor and outdoor lighting. These are all necessary and typical uses associated with a residential development. The proposed project does not include any unusual or unnecessary features that are not required for the operation of ten single-family homes. All energy infrastructure would be installed underground.

Electrical Energy

The proposed project would connect to the surrounding EBCE electricity system that currently serves the existing adjacent developed area. EBCE provides a minimum of 42 percent renewable and 58 percent carbon-free power service to its customers.[13]

The proposed new homes would increase energy demand compared to existing conditions. However, the proposed new development would adhere to the City's Green Building Compliance Standards and CALGreen, which includes meeting the "Build It Green" GreenPoint Rating requirement for new single-family construction. The GreenPoint Rating system provides voluntary measures that exceed the CALGreen 2019 standards.[14] New buildings are assumed to comply with the 2022 Building Energy Efficiency Standards of 24 CCR Part 6, which applies to any project that is proposed to begin construction on or after January 2023. [15] The 2022 Standards require all new homes be electric-ready to progress toward 100 percent clean electricity and carbon neutrality by midcentury or earlier. Therefore, compliance with these standards would contribute to energy efficiency and conservation. In addition, as described in Chapter 3, *Project Description*, of this Draft EIR, the proposed project entails the installation

[13] East Bay Community Energy, 2022, Our Power Mix, https://ebce.org/our-power-mix/, accessed October 24, 2022.

[14] GreenPoint Rated, *Understanding Green Building Standards*, https://www.builditgreen.org/wp-content/uploads/2021/08/GPR_comparison_chart_v8.pdf, accessed October 24, 2022.

[15] California Energy Commission, 2022, 2022 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency, accessed October 24, 2022.

of ENERGY STAR appliances, efficient HVAC designs or systems, solar panels, and all-electric appliances. Therefore, operation of the proposed project would not result in inefficient or wasteful electricity use.

Natural Gas Energy

As described in Chapter 3, *Project Description*, of this Draft EIR the project applicant has opted for the proposed homes to be all electric. Accordingly, the proposed new homes would result in no new natural gas demand.

Transportation Energy

During operation, the proposed project would consume transportation energy from residents driving motor vehicles to their houses. Based on the traffic study, the proposed project would generate 94 net-new daily vehicle trips on a typical weekday, including 7 vehicle trips during the morning (AM) peak hour and 10 vehicle trips during the evening (PM) peak hour.[16] As discussed in Chapter 4.15, *Transportation*, of this Draft EIR, a project generating less than 100 vehicle trips per day would be considered a small project by the City's Transportation Impact Review Guidelines and would cause a less-than-significant transportation impact.[17] Thus, it is expected that operation-related fuel usage associated with the proposed project would be similar to other small development projects and would not be inefficient, wasteful, or unnecessary. In addition, as described in Chapter 3, *Project Description*, of this Draft EIR, the proposed project would include the installation of electric vehicle (EV) charging stations as required under the OMC Chapter 15.04, Article III, Part 11, *California Green Building Standards Code Non-Administrative (Technical) Amendments,* including install full-circuit EV charging electric infrastructure for two parking spaces, with electric panel capacity sufficient to supply four parking spaces. Therefore, it is assumed that some of the residents would drive fuel-efficient vehicles, thus further ensuring the proposed transportation energy would not be inefficient, wasteful, or unnecessary.

In summary, natural gas use would not be required during construction nor operation of the proposed project. Electricity and liquid fuels use during construction and operation of the proposed project would not be considered inefficient, wasteful, or unnecessary. Therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

[16] W-Trans, July 2023, *Viewcrest Estates Residential Development CEQA Evaluation*. See Appendix I, *Transportation Impact Analysis*, of this Draft EIR.

[17] City of Oakland, April 14, 2017, *Transportation Impact Review Guidelines: Land Use Development Projects,* https://cao-94612.s3.amazonaws.com/documents/oak063581_2022-07-14-214248_nvyg.pdf, accessed October 14, 2022.

ENE-2 The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

California Renewable Portfolio Standard Program

Electrical needs to the project site would be provided by EBCE. The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers, such as EBCE, whose compliance RPS requirements would contribute to the state objective of transitioning to renewable energy. The EBCE obtains electricity from conventional and renewable sources throughout California. In 2021, 42.3 percent of EBCE's electricity was generated from renewable energy sources, and 57.7 percent was from large hydroelectric generators and other unspecified sources.[18] The increase in power demand associated with the proposed project is anticipated to be within the service capabilities of EBCE and would not impede EBCE's ability to implement California's renewable energy goals. In addition, all the new homes would be all electric and equipped with solar panels to increase renewable energy usage. Therefore, the proposed project would not obstruct implementation of the California RPS program.

Oakland Equitable Climate Action Plan

In July 2020, the Oakland ECAP was developed and adopted pursuant to City Council's adopted 2030 GHG emission-reduction target of 65 percent relative to 2005 levels, as well as Oakland's 2018 Climate Emergency and Just Transition Resolution.[19] The goal of the ECAP is to identify an equitable path to cost-effectively reduce Oakland's local climate emissions a minimum of 65 percent, transitioning away from fossil fuel dependence, and building resilient communities against climate change by 2030. A consistency analysis with the proposed project to the relevant policies in the City's ECAP is shown in Table 4.7-6, *Consistency with the City of Oakland Equitable Climate Action Plan*, in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR. As identified in Table 4.7-6, the proposed project would be consistent with the strategies in the City's ECAP. The proposed project would minimize energy-related impacts from the residential building sector by using EBCE as a 100 percent electric product, installing solar panels and ENERGY STAR appliances at each home, and other strategies listed in the table. Furthermore, pursuant to SCA-41, *Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist*, the proposed project would be required to implement all the measures in the ECAP Consistency Checklist submitted during the planning entitlement phase. In summary, the proposed project would not conflict with the California RPS program or City's ECAP. Therefore, the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

[18] East Bay Community Energy, 2022, Our Power Mix, https://ebce.org/our-power-mix/, accessed October 24, 2022.

[19] City of Oakland, July 2020, *Oakland 2030: Equitable Climate Action Plan*, https://cao-94612.s3.amazonaws.com/documents/Oakland-ECAP-07-24.pdf, accessed October 24, 2022.

ENE-3	**The proposed project would not 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.**

As described in Section 4.5.1.2, *Existing Conditions*, the electric energy provided by EBCE is conveyed to customers through PG&E's existing infrastructure. The proposed project would therefore be served by PG&E and EBCE through the existing PG&E grid. PG&E forecasts that it will have sufficient electricity supplies to meet demands in its service area, and the electricity demand due to project development is within the forecast increase in PG&E's electricity demands. In addition, the proposed project would be required to comply with energy-efficiency standards set forth by the 2022 Building Energy Efficiency Standards of 24 CCR Part 6 and the Appliance Efficiency Regulations. The proposed project would also comply with CALGreen requirements related to energy and water conservation to further decrease electricity consumption, pursuant to SCA-85, *Green Building Requirements*. Therefore, the proposed project would not result in a substantial increase in electrical service demands. PG&E would not need to expand its supply and transmission facilities to handle the demand generated by the proposed project and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

ENE-4	**The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to energy.**

The areas considered for cumulative impacts to electricity and natural gas supplies are the service areas of EBCE and PG&E. New development projects within the EBCE and PG&E service areas would be required to comply with the Building Energy Efficiency Standards and CALGreen, which would contribute to minimizing wasteful energy consumption and promoting renewable energy sources. Construction- and operation-related energy impacts caused by the proposed project would be less than significant and would not be considered inefficient, wasteful, or unnecessary. The proposed project would be consistent with the California RPS program and the Oakland ECAP, and PG&E would have adequate capacity to serve the proposed project's energy demand. The proposed project would therefore not contribute to any cumulative energy impacts when considered together with cumulative development projects. Therefore, cumulative impacts would be *less than significant*, and project impacts would not be cumulatively considerable.

Significance without Mitigation: Less than significant.

4.6 GEOLOGY AND SOILS

This chapter includes an evaluation of the potential environmental consequences related to geology and soils from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing geology and soils in the vicinity of the proposed project.

This chapter is based, in part, on the *Preliminary Geotechnical and Geologic Evaluation,* prepared by Henry Justiniano & Associates, dated August 5, 2015, herein referred to as Preliminary Geotechnical Report. See Appendix K, *Preliminary Geotechnical Report*, of this Draft Environmental Impact Report (EIR).

4.6.1 ENVIRONMENTAL SETTING

4.6.1.1 REGULATORY FRAMEWORK

Federal Regulations

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 was intended to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program. Pursuant to this Act, the National Earthquake Hazards Reduction Program was established, which designates the Federal Emergency Management Agency as the lead agency of the program. The National Earthquake Hazards Reduction Program provides valuable resources to guide building code requirements and planning efforts such as emergency evacuation responsibilities and seismic code standards.

State Regulations

Alquist-Priolo Earthquake Fault Zone

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 was intended to mitigate the hazard of surface fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The Act delineates “earthquake fault zones” along faults that are “sufficiently active” and “well defined.” The Act also requires that cities and counties withhold development permits for sites within an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Pursuant to this Act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

Seismic Hazards Mapping Act

Earthquakes can cause significant damage even if surface ruptures do not occur. The Seismic Hazards Mapping Act of 1990 was intended to protect the public from the hazards of nonsurface fault rupture from earthquakes, including strong ground shaking, liquefaction, seismically induced landslides, or other ground failure. The California Geological Survey prepares and provides local governments with seismic

hazard zone maps that identify areas susceptible to nonsurface fault hazards. The Seismic Hazards Mapping Act requires responsible agencies to approve projects within seismic hazard zones only after a site-specific investigation to determine if the hazard is present, and the inclusion, if a hazard is found, of appropriate mitigation(s).

California Building Code

Every public agency enforcing building regulations must adopt the provisions of the California Building Code (CBC), which is Title 24, Part 2 of the California Code of Regulations. The most recent version is the 2022 CBC (effective January 1, 2023). The CBC is updated every three years and provides minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC also contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock on-site, the strength of ground shaking, and specified probability of occurring at a site. A city may adopt more restrictive codes than state law based on conditions in their community.

Local Regulations

Oakland General Plan

The Oakland General Plan Safety Element contains seven chapters: 1) Introduction, 2) Public Safety, 3) Geologic Hazards, 4) Fire Hazards, 5) Hazardous Materials, 6) Flooding, and 7) Hazards by Area. Chapter 3, *Geologic Hazards*, analyzes Oakland's risk from the main geologic and seismic hazards, namely earthquake-induced fault rupture and ground shaking, liquefaction, and landslides and mudslides. Chapter 7, *Hazards by Area*, identifies the major environmental hazards of six distinct planning areas of the city; the project site is in the Upper Hills planning area. In addition, other elements of the Oakland General Plan, including the Open Space, Conservation, and Recreation Element, also include policies and guidelines relating to geology and soils. These are outlined in Table 4.6-1, *Oakland General Plan Policies Relevant to Geology and Soils and the Proposed Project*.

TABLE 4.6-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO GEOLOGY AND SOILS AND THE PROPOSED PROJECT

Policy No.	Text
Open Space, Conservation, and Recreation Element	
OS-1.3	**Development of hillside sites.** On large sites with subdivision potential, generally conserve ridges, knolls, and other visually prominent features as open space. Maintain development regulations which consider environmental and open space factors such as land stability, plant and animal resources, earthquake and fire hazards, and visual impacts, in the determination of allowable density. Where hillside development does occur, encourage creative architecture and site planning which minimizes grading and protects the natural character of the hills.
CO-2.1	**Slide Hazards.** Encourage development practices which minimize the risk of landsliding.
CO-2.2	**Unstable Geologic Features.** Retain geologic features known to be unstable, including serpentine rock, areas of known landsliding, and fault lines, as open space. Where feasible, allow such lands to be used for low-intensity recreational activities.
CO-2.4	**Hillside Cuts and Fills.** Minimize hillside cuts and fills and the removal of desirable vegetation. Limit large-scale grading to those areas where it is essential to development. Where hillside grading does occur, reshape the

TABLE 4.6-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO GEOLOGY AND SOILS AND THE PROPOSED PROJECT

Policy No.	Text
	terrain in smooth, naturally appearing contours rather than flat, terraced benches. Immediately replant and reseed graded areas to reduce soil loss.
Safety Element	
GE.1	Develop and continue to enforce and carry out regulations and programs to reduce seismic hazards and hazards from seismically triggered phenomena.
GE.2	Continue to enforce ordinances and implement programs that seek specifically to reduce the landslide and erosion hazards.
GE.3	Continue, enhance or develop regulations and programs designed to minimize seismically related structural hazards from new and existing buildings.
GE.4	Work to reduce potential damage from earthquakes to "lifeline" utility and transportation systems.

Source: City of Oakland, *City of Oakland General Plan*, *Open Space, Conservation, and Recreation Element* (June 1996) and *Safety Element* (November 2004).

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to geology and soil in Oakland. OMC Chapter 15.20, *Geologic Reports*, aims to mitigate the hazard due to fault rupture by limiting the placement of structures for human occupancy across the trace of active faults. Section 15.20.050, *Requirements*, requires any new structure, major addition or alteration, replacement, and subdivision projects to provide the City with geologic reports prior to the approval of the project.

OMC Section 15.04.3.2.065, *CBC Chapter 18B added,* requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as amount of proposed excavation and degree of site slope. During project construction, the volume of the excavated fill material could exceed 50 cubic yards and could result in a 20 percent slope on-site, or the depth of excavation could exceed five feet at any location. Therefore, the project sponsor would be required to apply for the grading permit and prepare a grading plan, erosion and sedimentation control plan, and drainage plan.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCAs are related to geology and soils and are applicable to the proposed project:

- SCA-36. Construction-Related Permit(s): 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.
- SCA-37. Soils Report: 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.

- SCA-39. Seismic Hazards Zone (Landslide/Liquefaction): The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.
- SCA-50. State Construction General Permit: The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.
- SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects:
  a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following:
     i. Location and size of new and replaced impervious surface;
     ii. Directional surface flow of stormwater runoff;
     iii. Location of proposed on-site storm drain lines;
     iv. Site design measures to reduce the amount of impervious surface area;
     v. Source control measures to limit stormwater pollution;
     vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and
     vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.
  b) Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following:
     i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and
     ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and

maintenance of the on-site stormwater treatment measures and to take corrective action if necessary.

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

- SCA-57. Vegetation Management on Creekside Properties: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project:
  a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat;
  b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact;
  c) Leave stumps and roots from cut down trees to prevent erosion;
  d) Plant fire-appropriate, drought-tolerant, preferably native vegetation;
  e) Provide erosion and sediment control protection if cutting vegetation on a steep slope;
  f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management;
  g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine);
  h) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat;
  i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development;
  j) Do not trim/prune branches that are larger than 4 inches in diameter;
  k) Do not remove tree canopy;
  l) Do not dump cut vegetation in the creek;
  m) Do not cut tall shrubbery to less than 3 feet high; and
  n) Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high.

- SCA-58. Creek Protection Plan:
  a) Creek Protection Plan Required: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d).
  b) Construction Best Management Practices: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control best management practices to protect the creek during construction. The measures shall include, but are not limited to, the following:
     i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.

ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.

iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.

iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted.

v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.

vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.

vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.

viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.

ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.

x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.

xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains.

xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB).

xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City.

c) Post-Construction Best Management Practices: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion.

d) Creek Landscaping: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival.

e) Creek Protection Plan Implementation: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.

4.6.1.2 EXISTING CONDITIONS

General Plan Safety Element Planning Area

As described in the Safety Element Chapter 7, *Hazards by Area*, the project site is identified within the Upper Hills planning area of Oakland, which is essentially the same area as the South Hills planning area identified in the Oakland General Plan's Land Use and Transportation Element.[1,2] This area is bounded roughly by Contra Costa County and the East Bay Regional Park District open spaces to the north and east, State Route 13 and Interstate 580 to the west and south, and the city of Berkeley to the west. Most of the Upper Hills planning area is zoned for residential and open space land uses. The Upper Hills planning area is exposed to landslide hazards because it is characterized by high, steep hills with significant natural areas. The area's relative isolation also makes it particularly vulnerable to the disruptive effects that an earthquake along the Hayward Fault would have on the area's transportation and utility infrastructure.

[1] City of Oakland, March 1998, *City of Oakland General Plan, Land Use and Transportation Element*.
[2] City of Oakland, November 2004, *City of Oakland General Plan, Safety Element.*

Geology

The project area is in the Caballo Hills neighborhood in the eastern hills of Oakland within the Coast Ranges Geomorphic Province.[3] The Coast Ranges Geomorphic Province is a long region of moderate relief with many elongated ridges and narrow valleys that are approximately parallel to the coast. The Coast Ranges Geomorphic Province extends about 600 miles from the Oregon border to the Santa Ynez River and is subdivided into the ranges north of San Francisco Bay and ranges south of the bay to Santa Barbara County. According to the site-specific Geotechnical Report, the property itself sits atop keratophyre and quartz keratophyre (formerly known as Leona Rhyolite) of the Coast Range Ophiolite Complex.[4] See Figure 4.6-1, *Geology Map*. This geology is thought to be altered remnants of a volcanic arc deposited during the late Jurassic Period (145 to 200 million years ago). The United States Department of Agriculture, Natural Resources Conservation Service, mapped the soil beneath the site as Maymen loam, which has a very high runoff rate. This soil is characterized by a moderately fine or fine texture and is typically less than two feet in thickness, overlying bedrock.[5] Site observations conducted for the preparation of the site-specific Preliminary Geotechnical Report correlate with the previously mapped Jurassic-aged igneous rocks. There were also areas of larger blocks that appeared to be weathered portions of intact bedrock. Cut slopes below the project site that were made for the adjacent downslope developments did not display evidence of obvious instability but yielded evidence of similar surficial float material.[6]

Faults

The site is not within a State-designated Alquist-Priolo Earthquake Fault Zone. The Hayward fault runs along the southwestern base of the eastern hills of Oakland and parallels State Route 13, making it an approximate physical boundary between the low-lying, urbanized portions of Oakland to the west and the less developed, upland areas to the east. As shown on Figure 4.6-2, *Seismic Hazard Zones*, no active faults are known to exist on the project site. Site observations conducted for the preparation of the site-specific Preliminary Geotechnical Report did not yield any geomorphic conditions with the project site that would suggest the presence of an active fault trace.[7] The project area has a high seismic rating due to its

[3] Norris, R. M., and R. W. Webb, 1990, *Geology of California,* 2nd ed.

[4] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

[5] United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed October 21, 2022.

[6] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

[7] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

proximity to several faults, the Hayward Fault in particular. The project site is approximately 0.6 miles from the Hayward Fault.[8] The largest magnitude event estimated to occur on this fault is a magnitude 7.5.[9, 10]

Liquefaction

The Oakland General Plan Safety Element does not identify the project area as a potential liquefaction area.[11] Additionally, according to the Association of Bay Area Governments' (ABAG) online interactive hazards mapping website, the project area is in an area with "very low" liquefaction hazard.[12] Based on the hillside development envelope and presence of shallow bedrock and lack of groundwater, liquefaction and densification at the project site are unlikely and considered to be insignificant.[13, 14]

Landslides

The project site has slopes ranging from 2.7:1 (horizontal:vertical) to 1.8:1, with a few localized areas as steep as 1.7:1. The topography varies on the project site and includes five swales and one topographic rise. The Oakland General Plan Safety Element identifies the eastern hills of Oakland as a potential landslide zone.[15] According to the ABAG online interactive hazards mapping website, the project area is mostly an area in which "few landslides" have occurred, although the area immediately south of the proposed development area is identified as an area with "most landslides."[16] In addition, the Seismic Landslide Hazards Map for the City of Oakland and Piedmont shows the project site to be in an area of "Low Seismic Landslide Hazard."[17] However, as shown on Figure 4.6-2, the State of California Seismic Hazards Zones mapping for the Oakland East Quadrangle and part of Las Trampas Ridge Quadrangle illustrates the project site as being partially in an area "where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code

[8] United States Geological Survey, U.S. Quaternary Faults, https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf, accessed October 21, 2022.

[9] California Department of Conservation, October 2008, Hayward Fault Fact Sheet, https://www.conservation.ca.gov/index/Pages/HaywardFaultFactSheet.aspx#:~:text=How%20large%20an%20earthquake%20can,generating%20a%20magnitude%207.5%20quake, accessed October 21, 2022.

[10] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

[11] City of Oakland, November 2004, *City of Oakland General Plan*, *Safety Element*.

[12] Association of Bay Area Governments and Metropolitan Transportation Commission, August 2021, MTC/ABAG Hazard Viewer, https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8, accessed October 21, 2022.

[13] United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed October 21, 2022.

[14] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

[15] City of Oakland, November 2004, *City of Oakland General Plan*, *Safety Element*.

[16] Association of Bay Area Governments and Metropolitan Transportation Commission, August 2021, MTC/ABAG Hazard Viewer, https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8, accessed October 21, 2022.

[17] S. B. Miles and D. K. Keefer, 2001, *Seismic Landslide Hazard for the Cities of Oakland and Piedmont, California,* https://pubs.usgs.gov/mf/2001/2379/oakmap.pdf, accessed October 21, 2022.

Section 2693 (c) would be required."[18] According to the site-specific Preliminary Geotechnical Report, based on the fact that the entire Viewcrest Drive area, along and downslope of the project site, has been extensively graded and developed, and the abundance of surficial volcanic float material and shallow rock outcropping, it is unclear as to the basis for this designation.[19] Site observations conducted for the preparation of the site-specific Preliminary Geotechnical Report did not yield any evidence of significant sliding.[20]

Expansive/Shrink-Swell Soils

Expansive soils are possible wherever clays and elastic silts may be present, including alluvial soils and weathered granitic and fine-grained sedimentary rocks. Expansive soils are typically very fine grained with a high to very high percentage of clay, typically montmorillonite, smectite, or bentonite clay. Linear extensibility soil tests are often used to identify expansive soils, wherein soil sample volume/length changes in response to reduced moisture content. A linear extensibility of 3 percent or greater connotes moderate to high shrink-swell potential. This soil behavior has the potential to cause damage to buildings, roads, and other structures.

According to the *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development, Oakland, CA* (see Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft EIR), the Maymen loam soils on the project site belong to Hydrologic Soil Group D, which exhibits slow infiltration rates and low hydraulic conductivity.[21] Group D soils typically have more than 40 percent clay, less than 50 percent sand, and have clayey textures. In some areas, they also have high shrink-swell potential.[22] Expansive soils generally contain some form of clay mineral that is able to absorb water and swell when wet then shrink when dry. According to the United States Department of Agriculture Web Soil Survey, the Maymen loam soils on the project site have a low expansive soils rating.[23]

[18] California Geological Survey, July 14, 2003, *State of California Seismic Hazard Zones, Oakland East and Part of Las Trampas Ridge Quadrangles, Official Map*.

[19] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

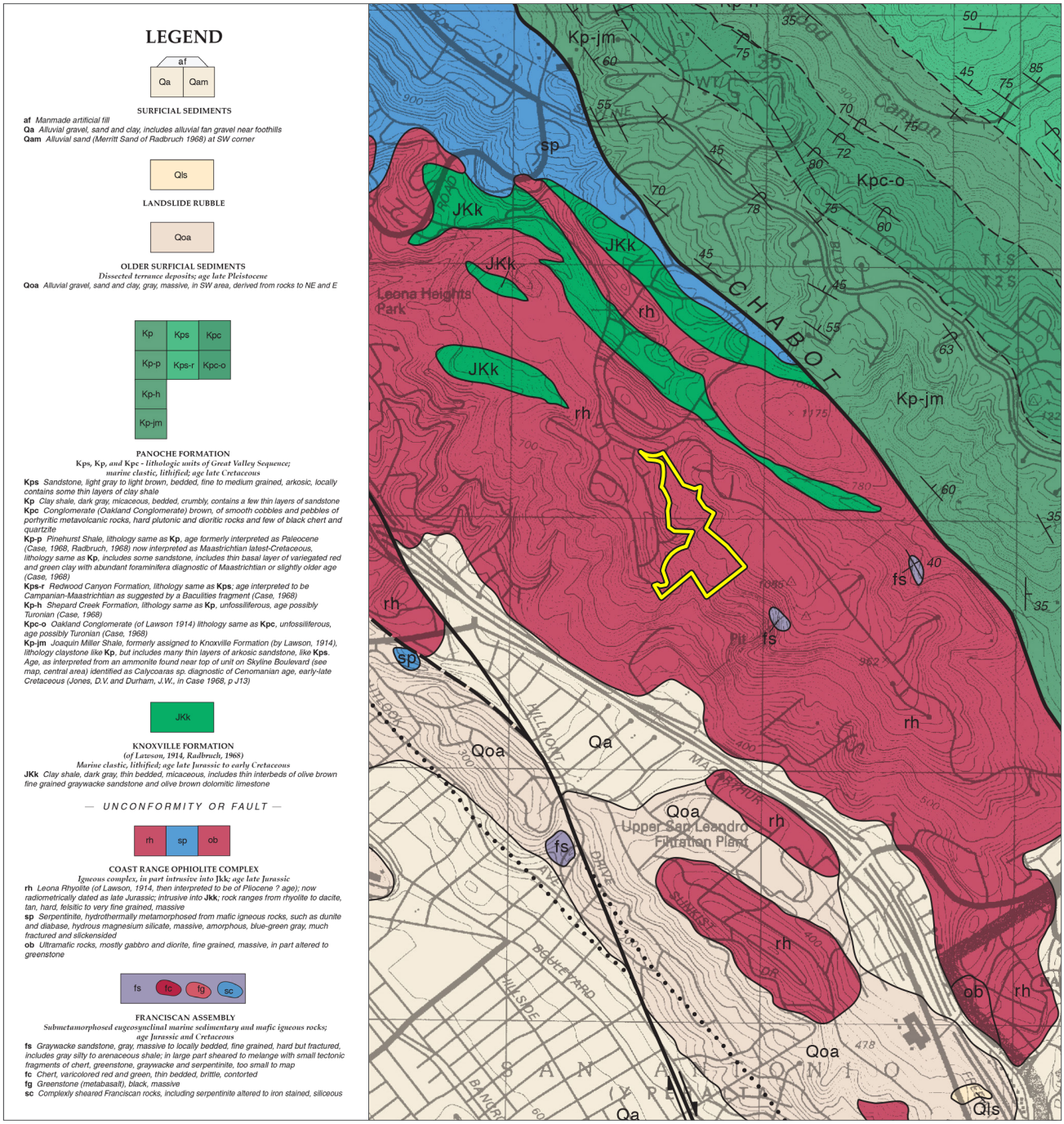
[20] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

[21] Clearwater Hydrology, 2021. *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development,* March 27. See Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft EIR.

[22] United States Department of Agriculture Natural Resources Conservation Service, Part 630 Hydrology National Engineering Handbook, Chapter 7 Hydrologic Soil Groups, May 2007.

[23] United States Department of Agriculture, Web Soil Survey, https://websoilsurevey.sc.egov.usda.gov/app/, accessed July 2023.

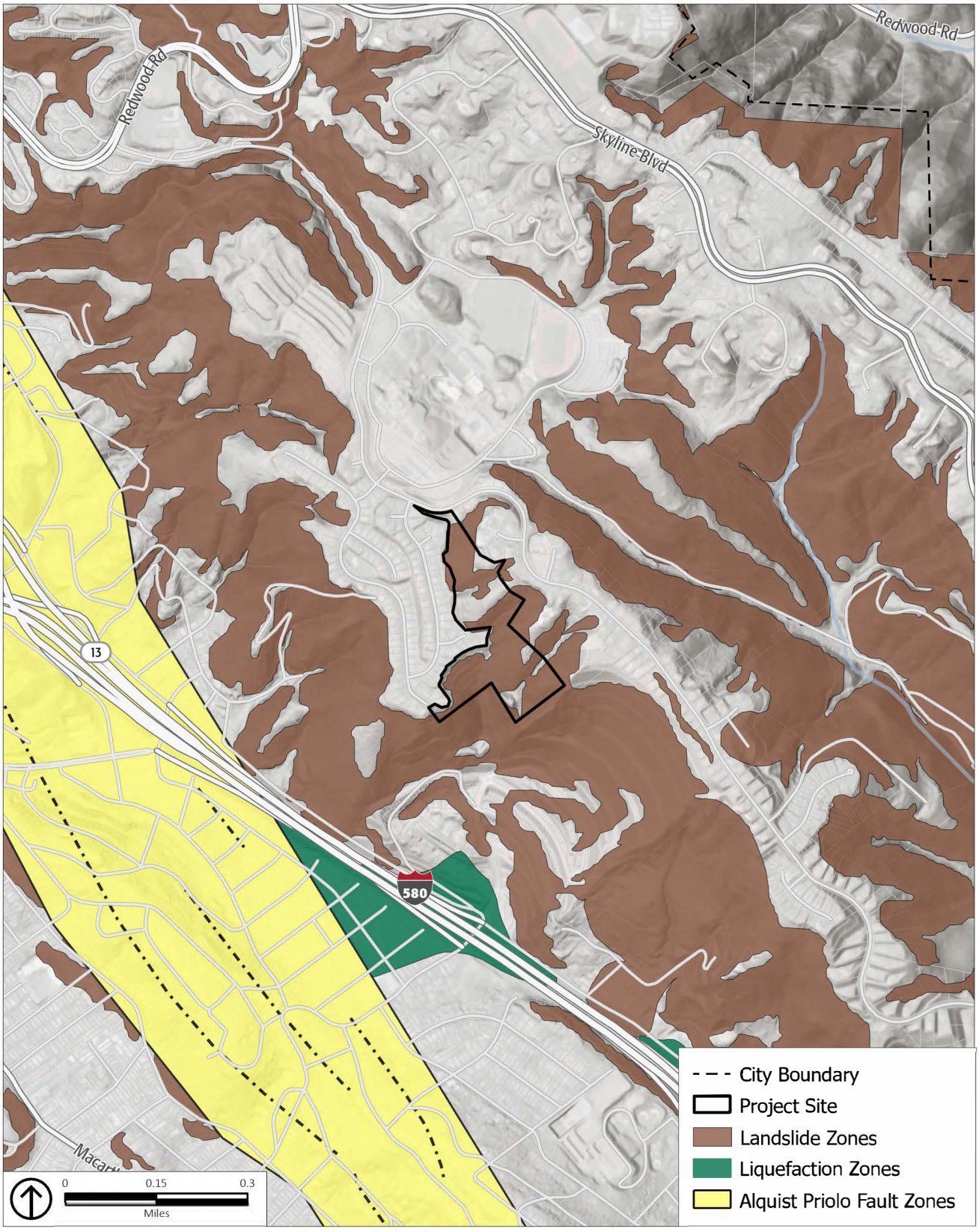
GEOLOGY AND SOILS



Source: Geologic Map of the Oakland East Quadrangle, by Thomas W. Dibblee, Jr., 2005

Approximate Project Site Boundary

Figure 4.6-1
Geology Map



Source: California Department of Conservation, California Geological Survey, 2022.

Figure 4.6-2
Seismic Hazard Zones

4.6.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant geology and soils impact if it would:

1. Expose people or structures to substantial risk of loss, injury, or death involving:
    a. 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 *[NOTE: Refer to California Geological Survey 42 and 117 and Public Resources Code section 2690 et. seq.]*;
    b. Strong seismic ground shaking;
    c. Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, or collapse; or
    d. Landslides.
2. Result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.
3. 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.
4. Be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property.
5. Be located above landfills for which there is no approved closure and post-closure plan, or unknown fill soils, creating substantial risks to life or property;
6. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
7. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to geology and soils.

4.6.3 IMPACT DISCUSSION

GEO-1	**The proposed project would not expose people or structures to substantial risk of loss, injury, or death involving: (a) 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; (b) Strong seismic ground shaking; (c) Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, or collapse; or (d) Landslides.**

Fault Rupture

As described in Section 4.6.1.2, *Existing Conditions*, and shown on Figure 4.6-2, the project site is not on top of an earthquake fault or within a mapped Earthquake Fault Zone pursuant to the California Department of Conservation, Division of Mines and Geology and the site-specific Geotechnical Report. Additionally, the site is not within a State-designated Alquist-Priolo Earthquake Fault Zone. Therefore, fault rupture is not known to be a significant geologic hazard at the site, and the impact would be *less than significant.*

Strong Seismic Ground Shaking

The project site is within the San Francisco Bay region, which experiences frequent earthquakes. Though the project site is not on an earthquake fault or in an earthquake fault zone, the likelihood of the project site experiencing ground shaking due to nearby faults is high, as it is throughout much of the region. Ground shaking is responsible for most of the damage from earthquakes and can damage or destroy buildings, structures, pipelines, and infrastructure. The intensity of shaking depends on the type of fault, distance to the epicenter, magnitude of the earthquake, and subsurface geology. Based on a probabilistic seismic hazard assessment for the San Francisco Bay region using a 10 percent probability in the next 50 years for all earthquake scenarios, the Caballo Hills neighborhood is expected to experience violent (Modified Mercalli Intensity Scale IX) ground shaking.[24] Under an earthquake scenario for the northern and southern segments of the Hayward Fault, the project site would experience very strong (Modified Mercalli Intensity Scale VII) ground shaking.[25]

Although the proposed project itself would not exacerbate seismic ground shaking, the placement of new residences on the project site without adherence to appropriate seismic recommendations would exacerbate the risks to occupants associated with earthquake events. However, construction of the

[24] Association of Bay Area Governments and Metropolitan Transportation Commission, 2020, Probabilistic Seismic Hazard Assessment, https://opendata.mtc.ca.gov/datasets/MTC::probabilistic-seismic-hazard-assessment/explore?location=37.874680%2C-122.370851%2C9.36, accessed October 21, 2022.

[25] Association of Bay Area Governments and Metropolitan Transportation Commission, August 2021, MTC/ABAG Hazard Viewer, https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8, accessed October 21, 2022.

project would be required to adhere to modern safety standards established in the CBC and Title 5 of the California Code of Regulations to minimize the shaking effects experienced during earthquakes. Additionally, in accordance with the City's project approval procedures, SCA-37, *Soils Report*, and SCA-39, *Seismic Hazards Zone (Landslide/Liquefaction)*, require the project applicant to submit a soils report and site-specific geotechnical report prepared by a registered geotechnical engineer for City review and approval to ensure the implementation of an appropriate level of soil engineering and building design to minimize ground-shaking hazards. The proposed project would also be required to obtain construction-related permits/approvals from the City, pursuant to SCA-36, *Construction-Related Permit(s)*. The proposed project would not cause ground shaking or other seismic events, and the project is not on an active fault. Through mandatory compliance with State and City permitting and building regulations, the proposed project would not exacerbate the effects of ground shaking, and the impact would be *less than significant* with regard to exposure of people or structures to strong ground shaking.

Liquefaction

As described in Section 4.6.1.2, *Existing Conditions,* the site is not identified as an area with the potential for liquefaction, and this conclusion is in conformity with local mapping for the site by ABAG and the site-specific Geotechnical Report.[26, 27] Therefore, there would be *less-than-significant* impacts from liquefaction.

Landslides

As described in Section 4.6.1.2, *Existing Conditions,* the project site is in an area where landslides have been known to occur, and the State of California Seismic Hazards Zones mapping for the Oakland East Quadrangle and part of Las Trampas Ridge Quadrangle illustrate the project site as being partially within an area "where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required."[28] According to the site-specific Preliminary Geotechnical Report, based on the fact that the entire Viewcrest Drive area along and downslope of the project site has been extensively graded and developed, and the abundance of surficial volcanic float material and shallow rock outcropping, it is unclear as to the basis for this designation.[29] Site observations conducted for the preparation of the site-specific Preliminary Geotechnical Report did not yield any evidence of significant sliding but noted that areas with irregular topographic relief should be investigated when subsurface work is performed for the site-specific geotechnical report required pursuant to SCA-39, *Expansive Soils*. Areas of minor erosion on the site may

[26] Association of Bay Area Governments and Metropolitan Transportation Commission, August 2021, MTC/ABAG Hazard Viewer, https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8, accessed October 21, 2022.

[27] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

[28] California Geological Survey, July 14, 2003, *State of California Seismic Hazard Zones, Oakland East and Part of Las Trampas Ridge Quadrangles, Official Map*.

[29] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

be controlled with proper grading and drainage techniques identified in the site-specific geotechnical report required pursuant to SCA-39.[30]

The proposed project would be required to comply with OMC Section 15.04.3.2.065, and utilize the appropriate grading and drainage methods for hillside development outlined in the site-specific geotechnical report required pursuant to SCA-39, *Expansive Soils,* prepared by a registered geotechnical engineer for City review and approval. Implementation of the requirements of OMC and Oakland SCAs would reduce potential for geologic hazards and landslide movement, and the impact would be *less than significant.*

Significance without Mitigation: Less than significant.

GEO-2 The proposed project would not result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.

Project activities such as grading, trenching, paving, tree and plant removal, and other soil disturbances can increase the potential for soil erosion on-site. Construction of the proposed project would result in impervious surface for the new roadway, single-family homes, and other project components. The addition of impervious surfaces would increase the stormwater runoff volume and rate compared to existing conditions. The increased stormwater runoff could then accelerate loss of topsoil and soil erosion during construction and operation. As described in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, during the construction phase, the proposed projects would be required to comply with the Construction General Permit, as identified in SCA-50, *State Construction General Permit*, which includes the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and the incorporation of best management practices (BMP) to control sedimentation and erosion runoff during construction. Figure 4.9-1, *Erosion Control Plan*, shows erosion-control measures that would be employed during construction, including storm drain inlet and catch basin filters, erosion-control blankets, silt fences, and fiber rolls.

In addition, Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, describes the preliminary design of stormwater features to ensure that the proposed project would not result in substantial soil erosion or loss of topsoil that would create substantial risks to life, property, or creeks/waterways during the operation of the proposed project. These features are shown on Figure 4.9-2, *Stormwater Management Plan*. As described in Chapter 4.9, the project site is in a hydromodification zone and meets the criteria to implement on-site hydromodification measures (i.e., creates one or more acres of impervious surfaces). This requires on-site stormwater retention for specified storm events to ensure that post-project flow rates and durations do not exceed pre-project conditions. The proposed project would incorporate an underground hydromodification vault, adjacent to the bioretention planter, to meet these requirements. The reduction in stormwater runoff from the site would also reduce the potential for erosion and siltation impacts.

[30] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Preliminary Geotechnical Report*, of this Draft EIR.

Pursuant to OMC Section 15.04.3.2.065, the proposed project would be required to apply for the grading permit and prepare a grading plan, erosion and sedimentation control plan, and drainage plan. Additionally, as discussed in detail in Chapter 4.9, the proposed project would be required to comply with SCAs related to stormwater pollution prevention (SCA-50, *State Construction General Permit*); erosion, sedimentation, and debris control measures (SCA-54, *NPDES C.3 Stormwater Requirements for Regulated Projects*); vegetation management adjacent to creeks (SCA-57, *Vegetation Management on Creekside Properties*); and preparation of a Creek Protection Plan (SCA-58, *Creek Protection Plan*).

Collectively, implementation of the BMPs outlined in the SWPPP and the erosion and sediment control plan would address the anticipated and expected erosion and siltation impacts during the construction and operational phases of the proposed project. Therefore, potential erosion impacts during construction and operation impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

GEO-3 The proposed project would not 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.

Expansive soils can undergo dramatic changes in volume in response to variations in soil moisture content. When wet, these soils can expand; conversely, when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomenon can include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can develop wide cracks in the dry season, and changes in soil volume have the potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils.

As described in Section 4.6.1.2, *Expansive Soils,* expansive soils are possible wherever clays and elastic silts are present, including alluvial soils and weathered granitic and fine-grained sedimentary rocks. The presence of expansive soils represents a hazard to structures and people. The soils on the project site are Maymen loam which have a low rating for expansive soils.[31] The proposed project would be required to obtain all required construction-related permits/approvals from the City, pursuant to SCA-36, *Construction-Related Permit(s)*. Additionally, SCA-37, *Soils Report*, and SCA-39, *Seismic Hazards Zone (Landslide/Liquefaction),* require the project applicant to submit a soils report and site-specific geotechnical report prepared by a registered geotechnical engineer for City review and approval. Compliance with SCA-37 would ensure that soils are properly identified in the proposed development area and that appropriate construction techniques and foundation supports are employed if expansive or other unstable soils conditions are present on the site. Because the soils on the project site have a low rating for expansive soils and implementation of Oakland SCAs would address any risk to life or property, impacts related to expansive soils would be *less than significant*.

Significance without Mitigation: Less than significant.

[31] United States Department of Agriculture, Web Soil Survey, https://websoilsurevey.sc.egov.usda.gov/app/, accessed July 2023.

GEO-4 The proposed project would not be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property.

The proposed project would not be located above a known well, pit, swamp, mount, tank vault, or unmarked sewer line.[32, 33, 34] Therefore, the proposed project would have *no impact* with regard to creating substantial risks to life or property.

Significance without Mitigation: No impact.

GEO-5 The proposed project would not be located above landfills for which there is no approved closure and post-closure plan, or unknown fill soils, creating substantial risks to life or property.

Based on a review of CalRecycle's Solid Waste Inventory System, there are no landfills on the project site or in the vicinity.[35] Based on a review of aerial photographs and Figure 4.6-1, no fill soils are apparent on the project site. Therefore, the proposed project would have *no impact* with respect to construction on unstable soils from past landfill activity.

Significance without Mitigation: No impact.

GEO-6 The proposed project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

The proposed project does not include the installation or use of septic or on-site wastewater disposal systems. As described in Chapter 3, *Project Description*, and Chapter 4.16, *Utilities and Service Systems*, of this Draft EIR, the proposed project would connect to existing municipal sewer service. Therefore, the proposed project would have *no impact* related to the use of septic tanks or alternative wastewater disposal systems.

Significance without Mitigation: No impact.

[32] California Department of Conservation, Geologic Energy Management Division, Well Finder, https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-122.16234/37.78436/16, accessed October 21, 2022.

[33] State Water Resources Control Board, 2022, GAMA Groundwater Information System, https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/, accessed October 21, 2022.

[34] United States Fish and Wildlife Service, National Wetlands Inventory, https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/, accessed on October 21, 2022.

[35] California Department of Resources Recycling and Recovery, 2019, SWIS Facility/Site Search, https://www2.calrecycle.ca.gov/SolidWaste/Site/Search, accessed October 21, 2022.

GEO-7 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to geology and soils.

The geographic area for the analysis of cumulative geology and soils impacts includes the City-approved projects and other foreseeable future projects in the city of Oakland. Development of approved and future projects in the city could increase erosion.

As discussed in detail in Chapter 4.9, *Hydrology and Water Quality,* of this Draft EIR, all new development or redevelopment projects in Oakland would be required to comply with Alameda County's C.3 provisions, which require BMPs. These BMPs include site design, source control, and treatment control measures that provide both flow control and treatment to runoff before it enters the storm drain system. Similarly, all projects would be required to comply with the CGP, prepare a SWPPP, and implement BMPs to minimize erosion and siltation impacts during construction.

When applicable, any new development in the city would be subject, on a project-by-project basis, to the applicable level of independent CEQA review as well as design guidelines, OMC requirements, Oakland SCAs, and other applicable City policies and procedures that reduce impacts related to geology and soils. For these reasons, impacts of the proposed project and approved and/or future projects on geology and soils are not cumulatively considerable, and the cumulative impact would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.7 GREENHOUSE GAS EMISSIONS

This chapter includes an evaluation of the potential environmental consequences related to greenhouse gas (GHG) emissions from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing GHG emissions in the vicinity of the proposed project.

Terminology

The following are definitions for terms used throughout this chapter:

- **Greenhouse gases (GHG):** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP):** Metric used to describe how much heat a molecule of a GHG absorbs relative to a molecule of carbon dioxide (CO_2) over a given period of time (20, 100, and 500 years). CO_2 has a GWP of 1.
- **Carbon dioxide-equivalent (CO_2e)**: The standard unit to measure the amount of GHGs in terms of the amount of CO_2 that would cause the same amount of warming. CO_2e is based on the GWP ratios between the various GHGs relative to CO_2.
- **$MTCO_2e$:** Metric ton of CO_2e.
- **$MMTCO_2e$:** Million metric tons of CO_2e.

4.7.2 ENVIRONMENTAL SETTING

4.7.2.1 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed in the twentieth and twenty-first centuries. Other GHGs

identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.[1,2,3]

The major GHGs are briefly described below.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (i.e., sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock, and other agricultural practices, and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of applicable GHG emissions are shown in Table 4.7-1, *GHG Emissions and Their Relative Global Warming Potential Compared to CO_2*. The GWP is used to convert GHGs to CO_2e to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fourth Assessment Report (AR4) GWP values for methane, a project that generates 10 MT of CH_4 would be equivalent to 250 MT of CO_2.[4]

[1] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

[2] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. According to the California Air Resources Board, California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities . However, State and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

[3] Intergovernmental Panel on Climate Change, 2001, *Third Assessment Report: Climate Change 2001, Synthesis Report,* https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_TAR_full_report.pdf, accessed October 24, 2022.

[4] CO_2-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

TABLE 4.7-1 GHG EMISSIONS AND THEIR RELATIVE GLOBAL WARMING POTENTIAL COMPARED TO CO_2

GHGs	Second Assessment Report (SAR) Global Warming Potential Relative to CO_2 [a]	Fourth Assessment Report (AR4) Global Warming Potential Relative to CO_2 [a]	Fifth Assessment Report (AR5) Global Warming Potential Relative to CO_2 [a]
Carbon Dioxide (CO_2)	1	1	1
Methane [b] (CH_4)	21	25	28
Nitrous Oxide (N_2O)	310	298	265

Notes: GWP values identified in AR4 are used by the Air District to maintain consistency in statewide GHG emissions modeling.
a. Based on 100-year time horizon of the GWP of the air pollutant compared to CO_2.
b. The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.
Sources: Intergovernmental Panel on Climate Change, 1995, *Second Assessment Report: Climate Change 1995*; Intergovernmental Panel on Climate Change, 2007, *Fourth Assessment Report: Climate Change 2007: Impacts, Adaptation and Vulnerability*; Intergovernmental Panel on Climate Change, 2014, *Fifth Assessment Report: Climate Change 2014, Synthesis Report*.

Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the twentieth century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The amount of CO_2 in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation.[5] The global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants.[6] In the past, gradual changes in the Earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime.[7]

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily on future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events.

[5] Intergovernmental Panel on Climate Change, 2007, *Fourth Assessment Report: Climate Change 2007, Impacts, Adaptation and Vulnerability,* https://www.ipcc.ch/site/assets/uploads/2018/03/ar4_wg2_full_report.pdf, accessed October 24, 2022.

[6] California Environmental Protection Agency, Climate Action Team, March 2006, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, http://s3-us-west-2.amazonaws.com/ucldc-nuxeo-ref-media/0bdec21c-ca2b-4f4d-9e11-35935ac4cf5f, accessed October 24, 2022.

[7] Intergovernmental Panel on Climate Change, 2007, *Fourth Assessment Report: Climate Change 2007, Impacts, Adaptation and Vulnerability,* https://www.ipcc.ch/site/assets/uploads/2018/03/ar4_wg2_full_report.pdf, accessed October 24, 2022.

Climate-change scenarios are affected by varying degrees of uncertainty—for example, on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

Potential Climate Change Impacts for California

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide average temperatures increased by about 1.7 degrees Fahrenheit (°F) from 1895 to 2011, and warming has been greatest in the Sierra Nevada.[8] The years from 2014 through 2016 have shown unprecedented temperatures, with 2014 being the warmest.[9] By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1°F to 8.6°F, depending on emissions levels.[10]

In California and western North America, observations of the climate have shown: (1) a trend toward warmer winter and spring temperatures; (2) a smaller fraction of precipitation falling as snow; (3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; (4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and (5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms.[11] Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, and unprecedented dry years in 2014 and 2015. Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years from 2012 to 2015.[12]

[8] California Climate Change Center, 2012, *Our Changing Climate 2012, Vulnerability and Adaptation to the Increasing Risks from Climate Change in California,* https://ucanr.edu/sites/Jackson_Lab/files/155618.pdf, accessed October 24, 2022.

[9] Office of Environmental Health Hazards Assessment, May 2018, *Indicators of Climate Change in California,* https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf, accessed February 10, 2022.

[10] California Climate Change Center, 2012, *Our Changing Climate 2012, Vulnerability and Adaptation to the Increasing Risks from Climate Change in California,* https://ucanr.edu/sites/Jackson_Lab/files/155618.pdf, accessed October 24, 2022.

[11] California Environmental Protection Agency, Climate Action Team, March 2006, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, http://s3-us-west-2.amazonaws.com/ucldc-nuxeo-ref-media/0bdec21c-ca2b-4f4d-9e11-35935ac4cf5f, accessed October 24, 2022.

[12] Office of Environmental Health Hazards Assessment, May 2018, *Indicators of Climate Change in California,* https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf, accessed October 24, 2022.

According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 4.7-1), and the inertia of the Earth's climate system could produce as much as 0.6 degrees Celsius (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 4.7-2, *Summary of GHG Emissions Risk to California*, and described in the list that follows.[13]

TABLE 4.7-2 SUMMARY OF GHG EMISSIONS RISK TO CALIFORNIA

Impact Category	Potential Risks
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Poor air quality made worse Higher temperatures increase ground-level ozone (i.e., smog) levels
Water Resource Impacts	Decreasing Sierra Nevada snow pack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species

Sources: California Climate Change Center, July 2012, *Our Changing Climate 2012, Vulnerability and Adaptation to the Increasing Risks from Climate Change in California;* Climate Change Center, July 2006, *Our Changing Climate, Assessing the Risks to California*; Climate Change Center, May 2009, *The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California;* California Natural Resources Agency, July 2014, *Safeguarding California: Reducing Climate Risk, An Update to the 2009 California Climate Adaptation Strategy*.

- Water Resources Impacts. By late this century, all projections show drying, and half of the projections suggest 30-year average precipitation will decline by more than 10 percent below the historical average. Even in projections with relatively little or no decline in precipitation, central and southern

[13] California Council on Science and Technology, September 2012, *California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets,* https://ccst.us/wp-content/uploads/2012ghg.pdf, accessed October 24, 2022.

parts of the state are expected to be drier from the warming effects alone because the spring snowpack will melt sooner, and the moisture in soils will evaporate during long dry summer months.

- Wildfire Risks. Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. Human activities will continue to be the biggest factor in ignition risk. The number of large fires statewide is estimated to increase by 58 to 128 percent above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57 to 169 percent, depending on location.
- Health Impacts. Many of the gravest threats to public health in California stem from the increase of extreme conditions, principally more frequent, more intense, and longer heat waves. Particular concern centers on the increasing tendency for multiple hot days in succession, and simultaneous heat waves in several regions throughout the state. Public health could also be affected by climate change impacts on air quality, food production, the amount and quality of water supplies, energy pricing and availability, and the spread of infectious diseases. Higher temperatures also increase ground-level ozone levels. Furthermore, wildfires can increase particulate air pollution in the major air basins of California.
- Increased Energy Demand. Increases in average temperature and higher frequency of extreme heat events combined with new residential development across the state will drive up the demand for cooling in the increasingly hot and longer summer season and decrease demand for heating in the cooler season. Warmer, drier summers also increase system losses at natural gas plants (reduced efficiency in the electricity generation process at higher temperatures) and hydropower plants (lower reservoir levels). Transmission of electricity will also be affected by climate change. Transmission lines lose 7 to 8 percent of transmitting capacity in high temperatures while needing to transport greater loads. This means that more electricity needs to be produced to make up for the loss in capacity and the growing demand.

4.7.2.2 REGULATORY FRAMEWORK

Federal Regulations

The United States Environmental Protection Agency (USEPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The USEPA's final findings respond to the 2007 United States Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not themselves impose any emission-reduction requirements but allowed the USEPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.[14]

[14] United States Environmental Protection Agency, December 2009, EPA: Greenhouse Gases Threaten Public Health and the Environment, https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html#:~:text=GHGs%20are%20the%20primary%20driver,health%20and%20welfare%20of%20Americans, accessed February 10, 2022.

To regulate GHGs from passenger vehicles, the USEPA was required to issue an endangerment finding.[15] The finding identifies emissions of six key GHGs: CO_2, CH_4, N_2O, HCFCs, PFCs, and SF_6. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, per Bay Area Air Quality Management District (BAAQMD) guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

- United States Mandatory Report Rule for Greenhouse Gases (2009). In response to the endangerment finding, the USEPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (e.g., large stationary sources) to report GHG emissions data. Facilities that emit 25,000 $MTCO_2e$ per year are required to submit an annual report.
- Update to Corporate Average Fuel Economy Standards (2017 to 2026). The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (mpg) in 2025. On March 30, 2020, the USEPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. On December 21, 2021, under direction of Executive Order (EO) 13990 issued by the current administration, the National Highway Traffic Safety Administration repealed SAFE Vehicles Rule Part One, which had preempted State and local laws related to fuel economy standards. In addition, on August 5, 2021, the National Highway Traffic Safety Administration announced new proposed fuel standards in response to EO 13990. Fuel efficiency under the standards proposed would increase 8 percent annually for model years 2024 to 2026 and increase estimate fleetwide average by 12 mpg for model year 2026 relative to model year 2021.[16]
- USEPA Regulation of Stationary Sources under the Clean Air Act (Ongoing). Pursuant to its authority under the Clean Air Act, the USEPA has been developing regulations for new, large, stationary sources of emissions, such as power plants and refineries. Under the 2013 Climate Action Plan, the USEPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the USEPA issued the final Affordable Clean Energy rule, which was crafted under the direction of the federal Energy Independence EO and became effective August 19, 2019. It officially rescinded the Clean Power Plan rule issued during that administration and sets emissions guidelines for states in developing plans to limit CO_2 emissions from coal-fired power plants. However, the Affordable Clean Energy rule was vacated by the United States Court of Appeals for the District of Columbia Circuit on January 19, 2021. The current administration is currently assessing options on potential future regulations.

[15] United States Environmental Protection Agency, December 21, 2021, EPA: Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a, accessed February 10, 2022.

[16] National Highway Traffic Safety Administration, August 5, 2021, USDOT Proposes Improved Fuel Economy Standards for MY 2024-2026 Passenger Cars and Light Trucks, https://www.nhtsa.gov/press-releases/fuel-economy-standards-2024-2026-proposal, accessed February 10, 2022.

State Regulations

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05, EO B-30-15, EO B-55-18, Assembly Bill (AB) 32, Senate Bill (SB) 32, AB 1279, and SB 375:

- Executive Order S-03-05. Signed June 1, 2005, this EO set the following GHG reduction targets for the state:
  - 2000 levels by 2010
  - 1990 levels by 2020
  - 80 percent below 1990 levels by 2050
- Assembly Bill 32. Also known as the Global Warming Solutions Act (2006), AB 32 was signed August 31, 2006, to reduce California's contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in EO S-03-05. Under AB 32, California Air Resources Board (CARB) prepared the *2008 Climate Change Scoping Plan*, the *2014 Climate Change Scoping Plan,* and the *2017 Climate Change Scoping Plan,* which are discussed herein.
  - CARB 2008 Scoping Plan. The 2008 Scoping Plan, adopted by CARB on December 11, 2008, identified that GHG emissions in California are anticipated to be 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state. To effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.
  - First Update to the Scoping Plan. CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted May 22, 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goal defined in the 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, are slightly higher at 431 $MMTCO_2e$. As identified in the Update to the Scoping Plan, California is on track to meet the goals of AB 32. The update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the State to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals.[17] CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets

[17] California Air Resources Board, May 2014, *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006*, https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf, accessed October 24, 2022.

will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit.[18]

- Executive Order B-30-15. Signed April 29, 2015, this EO set a goal of reducing GHG emissions in the state to 40 percent of 1990 levels by year 2030. EO B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, to ensure climate change is accounted for in state planning and investment decisions.
- Senate Bill 32 and Assembly Bill 197. In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the EO goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

  2017 Climate Change Scoping Plan Update. EO B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB adopted the 2017 Climate Change Scoping Plan Update, which outlined potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan established a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.[19] California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning, to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and TACs emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:
  - Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZE buses and trucks.
  - Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
  - Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy-efficiency savings by 2030.

[18] California Air Resources Board, May 2014, *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006*, https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf, accessed October 24, 2022.

[19] California Air Resources Board, January 20, 2017, *The 2017 Climate Change Scoping Plan Update, The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target*, https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf, accessed October 24, 2022.

- California Sustainable Freight Action Plan, which improves freight system efficiency, uses near-zero emissions technology, and deployment of ZE trucks.
- Implementing the Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the State's long-term GHG reduction goals and identified local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends statewide targets of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the State's 1990 emissions limit established under AB 32. For California Environmental Quality Act (CEQA) projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population)—consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits. The Scoping Plan scenario is set against what is called the business-as-usual yardstick—that is, what would the GHG emissions look like if the State did nothing at all beyond the existing policies that are required and already in place to achieve the 2020 limit, as shown in Table 4.7-3, *2017 Climate Change Scoping Plan Emissions Reductions Gap to Achieve the 2030 GHG Target*.

TABLE 4.7-3 2017 CLIMATE CHANGE SCOPING PLAN EMISSIONS REDUCTIONS GAP TO ACHIEVE THE 2030 GHG TARGET

Modeling Scenario	2030 GHG Emissions $MMTCO_2e$
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	**260**
Gap to 2030 Target with Known Commitments	**60**

Source: California Air Resources Board, January 20, 2017, *The 2017 Climate Change Scoping Plan Update, The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target*, https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf, accessed October 24, 2022.

Table 4.7-3 includes the existing renewables requirements, advanced clean cars, the "10 percent" LCFS, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 $MMTCO_2e$ above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

Table 4.7-4, *2017 Climate Change Scoping Plan Emissions by Sector to Achieve the 2030 GHG Target*, provides GHG emissions by sector for 1990, the range of GHG emissions for each sector estimated for 2030, and the percentage change compared to 1990 levels.

TABLE 4.7-4 2017 CLIMATE CHANGE SCOPING PLAN EMISSIONS BY SECTOR TO ACHIEVE THE 2030 GHG TARGET

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24-25	-8% to -4%
Residential and Commercial	44	38-40	-14% to -9%
Electric Power	108	30-53	-72% to -51%
High GWP	3	8-11	267% to 367%
Industrial	98	83-90	-15% to -8%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-32% to -27%
Net Sink [a]	-7	TBD	TBD
Sub Total	431	294-339	-32% to -21%
Cap-and-Trade Program	NA	24-79	NA
Total	**431**	**260**	**-40%**

Notes: TCU = Transportation, Communications, and Utilities; TBD = To Be Determined; NA = Not Applicable.
a. Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.
Source: California Air Resources Board, January 20, 2017, *The 2017 Climate Change Scoping Plan Update, The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target*, https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf, accessed October 24, 2022.

- **Renewable Portfolio/Carbon Neutrality Regulations – Executive Order B-55-18.** EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions should be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.
  - 2022 Climate Change Scoping Plan Update. CARB released the Draft 2022 Scoping Plan on May 10, 2022. The Scoping Plan was updated to address the carbon neutrality goals of EO B-55-18. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and

transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. Carbon neutrality takes it one step further by expanding actions to capture and store carbon, including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time. The measures in the Scoping Plan would achieve 80 percent below 1990 levels by 2050. Final adoption of the 2022 Scoping Plan is anticipated in late fall 2022.[20] CARB's 2022 Scoping Plan identifies strategies that would be most impactful at the local level for ensuring substantial process towards the State's carbon neutrality goals (see Table 4.7-5, *Priority Strategies for Local Government Climate Action Plans*).

TABLE 4.7-5 PRIORITY STRATEGIES FOR LOCAL GOVERNMENT CLIMATE ACTION PLANS

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV).
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as permit streamlining, infrastructure siting, consumer education, or preferential parking policies).
VMT Reduction	Reduce or eliminate minimum parking standards in new developments,
	Adopt and implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase public access to shared clean mobility options (such as planning for and investing in electric shuttles, bike share, car share, transit).
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands.
Building Decarbonization	Adopt policies and incentive programs to implement energy efficiency retrofits (such as weatherization, lighting upgrades, replacing energy intensive appliances and equipment with more efficient systems, etc.).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings.
	Adopt policies and incentive programs to reduce electrical loads from equipment plugged into outlets (such as purchasing Energy Star equipment for municipal buildings, occupancy sensors, smart power strips, equipment controllers, etc.).
	Facilitate deployment of renewable energy production and distribution and energy storage.

Source: California Air Resources Board, May 10, 2022, *Draft 2022 Scoping Plan Update*, https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents, accessed October 24, 2022.

For CEQA projects for proposed land use developments, CARB recommends demonstrating that they are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

- At least 20 percent of the units are affordable to lower-income residents;

[20] California Air Resources Board, May 10, 2022, *Draft 2022 Scoping Plan Update*, https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents, accessed October 24, 2022.

- Result in no net loss of existing affordable units;
- Use existing infill sites that are surrounded by urban uses, and reuse or redevelop previously developed, underutilized land presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer);
- Include transit-supportive densities (minimum of 20 residential dwelling units/acre), or are in proximity to existing transit (within a half mile), or satisfy more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS), for "SCS consistency" that would go further to reduce emissions;
- Do not result in the loss or conversion of the state's natural and working lands;
- Use all electric appliances, without any natural gas connections, and would not use propane or other fossil fuels for space heating, water heating, or indoor cooking;
- Provide electric vehicle charging infrastructure at least in accordance with the California Green Building Standards Code (CALGreen) Tier 2 standards;
- Relax parking requirements by:[21]
  - Eliminating parking requirements or including maximum allowable parking ratios.
  - Providing residential parking supply at a ratio of <1 parking space per unit.
  - Unbundling residential parking costs from costs to rent or lease.

The second approach to project-level alignment with State climate goals is net-zero GHG emissions. The third approach to demonstrating project-level alignment with State climate goals is to align with GHG thresholds of significance, which many local air quality management districts and air pollution control districts have developed or adopted.[22]

- Assembly Bill 1279. On August 31, 2022, the California Legislature passed AB 1279, which requires California to achieve net-zero GHG emissions no later than 2045 and to achieve and maintain negative GHG emissions thereafter. Additionally, AB 1279 also establishes a GHG emissions-reduction goal of 85 percent below 1990 levels by 2045. CARB will be required to update the scoping plan to identify and recommend measures to achieve the net-zero and GHG emissions-reduction goals.
- Senate Bill 375. In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions-reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Metropolitan Transportation Commission (MTC) is the MPO for the nine-county San Francisco Bay Area region. Pursuant to the recommendations of the Regional Transportation Advisory

[21] California Air Resources Board, May 10, 2022, *Draft 2022 Scoping Plan Update*, https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents, accessed October 24, 2022.

[22] California Air Resources Board, May 10, 2022, *Draft 2022 Scoping Plan Update*, https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents, accessed October 24, 2022.

Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

- 2017 Update to the SB 375 Targets. CARB is required to update the targets for the MPOs every eight years. CARB adopted revised SB 375 targets for the MPOs in March 2018. The updated targets become effective on October 1, 2018. The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies, and any potential future state strategies, such as statewide road user pricing.

  The proposed targets call for greater per capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets that either match or exceed the emission-reduction levels in the MPOs' currently adopted SCS to achieve the SB 375 targets. For the next SCS update, CARB's updated targets for the MTC/Association of Bay Area Governments (ABAG) region are a 10 percent per capita GHG reduction in 2020 from 2005 levels (compared to 7 percent under the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 15 percent). CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies.[23]

- Transportation Sector Regulations – Assembly Bill 1493. California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the USEPA. In 2012, the USEPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.[24]
- Transportation Sector Regulations – Executive Order S-01-07. On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. EO S-01-07 sets a declining standard for GHG

[23] California Air Resources Board, February 2018, *Updated Final Staff Report, Proposed Update to the SB 375 Greenhouse Gas Emissions Reduction Targets*, https://ww2.arb.ca.gov/sites/default/files/2020-06/SB375_Updated_Final_Target_Staff_Report_2018.pdf, accessed February 10, 2022.

[24] See also the discussion on the update to the CAFE standards under Federal Laws, above. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

emissions measured in CO_2e gram per unit of fuel energy sold in California. The LCFS required a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and uses market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

- Transportation Sector Regulations – Executive Order B-16-2012. On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the California Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The EO also directed the number of ZE vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The EO also establishes a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.
- Transportation Sector Regulations – Executive Order N-79-20. On September 23, 2020, Governor Newsom signed EO N-79-20, whose goal is that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The EO's goal for the State is to transition to 100 percent ZE off-road vehicles and equipment by 2035, where feasible.
- Renewable Portfolio/Carbon Neutrality Regulations – Senate Bills 1078, 107, and X1-2, and Executive Order S-14-08. A major component of California's Renewable Energy Program is the RPS established under SB 1078 and SB 107. Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. EO S-14-08, signed in November 2008, expanded the State's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.
- Renewable Portfolio/Carbon Neutrality Regulations – Senate Bill 350. SB 350 was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.
- Renewable Portfolio/Carbon Neutrality Regulations – Senate Bill 100. On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase

carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

- Renewable Portfolio/Carbon Neutrality Regulations – Executive Order B-55-18. Signed September 10, 2018, EO B-55-18 sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter."[25] EO B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.
- Energy Efficiency Regulations – California Building Code: Building Energy Efficiency Standards. Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2022 Building Energy Efficiency Standards were adopted in August 2021 with an effective date of January 1, 2023.
- Energy Efficiency Regulations – California Building Code: CALGreen. On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The CALGreen (24 CCR, Part 11) was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.[26] The mandatory provisions of CALGreen became effective January 1, 2011. The 2022 CALGreen became effective on January 1, 2023.
- Energy Efficiency Regulations – 2006 Appliance Efficiency Regulations. The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601 through 1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.
- Solid Waste Regulations – Assembly Bill 939. California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code Section 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the Act requires that each city and

[25] Executive Order B-55-18
[26] The green building standards became mandatory in the 2010 edition of the code.

county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

- Solid Waste Regulations – Assembly Bill 341. AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.
- Solid Waste Regulations – Assembly Bill 1327. The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code Section 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The Act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.
- Solid Waste Regulations – Assembly Bill 1826. In October 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. AB 1826 also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.
- Water Efficiency Regulations – Senate Bill X7-7. The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to SB 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed SBX7-7. SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.
- Water Efficiency Regulations – Assembly Bill 1881. The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.
- Short-Lived Climate Pollutants – Senate Bill 1383. On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and methane. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013

levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use.[27] In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

Regional Regulations

Plan Bay Area: Strategy for a Sustainable Region

MTC and ABAG adopted *Plan Bay Area* 2050 on October 21, 2021.[28] *Plan Bay Area* 2050 provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Under the *Plan Bay Area* 2050 strategies, just under half of all Bay Area households would live within 0.5 miles of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecast to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19 percent reduction in per capita emissions by 2035—but only if all strategies are implemented.

To achieve MTC/ABAG's sustainable vision for the Bay Area, the *Plan Bay Area* land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. The proposed project, though within 0.4 miles of the nearest bus stop at Merritt College, is not in an identified PDA.[29]

Bay Area Clean Air Plan

BAAQMD adopted the 2017 *Clean Air Plan, Spare the Air, Cool the Climate* on April 19, 2017. The 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the State's

[27] California Air Resources Board, 2017, *Short-Lived Climate Pollutant Reduction Strategy*, https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf, accessed October 24, 2022.

[28] Association of Bay Area Governments and the Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed October 24, 2022.

[29] Metropolitan Transportation Commission, updated July 2020, Priority Development Areas (Plan Bay Area 2050), https://opendata.mtc.ca.gov/datasets/priority-development-areas-plan-bay-area-2050, accessed October 24, 2022.

2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:[30]

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A comprehensive multipollutant control strategy has been developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, toxic air contaminants, and GHG from a full range of emission sources. These control measures cover the following sectors: (1) stationary (industrial) sources; (2) transportation; (3) energy; (4) agriculture; (5) natural and working lands; (6) waste management; (7) water; and (8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
- Increase efficiency of the energy and transportation systems.
- Reduce demand for vehicle travel and high-carbon goods and services.
- Decarbonize the energy system.
- Make the electricity supply carbon-free.
- Electrify the transportation and building sectors.

Bay Area Commuter Benefits Program

Under BAAQMD Regulation 14, Model Source Emissions Reduction Measures, Rule 1, Bay Area Commuter Benefits Program, employers with 50 or more full-time employees within the BAAQMD are required to register and offer commuter benefits to employees. In partnership with BAAQMD and the MTC, the rule's purpose is to improve air quality, reduce GHG emissions, and decrease the Bay Area's traffic congestion by encouraging employees to use alternative commute modes, such as transit, vanpool, carpool, bicycling, and walking. The benefits program allows employees to choose from one of four commuter benefit options—a pre-tax benefit, employer-provided subsidy, employer-provided transit, or alternative commute benefit.

[30] Bay Area Air Quality Management District, April 2017, *Final 2017 Clean Air Plan, Spare the Air, Cool the Climate, A Blueprint for Clean Air and Climate Protection in the Bay Area*, https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en, accessed October 24, 2022.

Local Regulations

Oakland General Plan

The Oakland General Plan Land Use and Transportation Element contains policies and implementation programs for land use in the city, categorized by industry and commerce, transportation and transit-oriented development, neighborhoods, waterfront, and downtown. It includes policies that support GHG emissions reduction. In addition, other elements of the Oakland General Plan, including the Housing Element and the Open Space, Conservation, and Recreation Element, also include policies and guidelines relating to GHG emissions. These are outlined in Table 4.7-6, *Oakland General Plan Policies Relevant to Greenhouse Gas Emissions and the Proposed Project*.

TABLE 4.7-6 OAKLAND GENERAL PLAN POLICIES RELEVANT TO GREENHOUSE GAS EMISSIONS AND THE PROPOSED PROJECT

Policy No.	Text
Open Space, Conservation, and Recreation Element	
CO-12.2	**Coordinated Transportation Systems.** Maintain a coordinated bus, rail, and ferry transit system which provides efficient service to major destinations and promotes alternatives to the single passenger auto.
CO-12.3	**Transportation Systems Management.** Expanding existing transportation systems management and transportation demand management strategies which reduce congestion, vehicle idling, and traveling in single passenger autos.
CO-12.4	**Design of Development to Minimize Air Quality Impacts.** Require that development projects be design in a manner which reduces potential adverse air quality impacts. This may include: (a) the use of vegetation and landscaping to absorb carbon monoxide and to buffer sensitive receptors; (b) the use of low-polluting energy sources and energy conservation measures; (c) designs which encourage transit use and facilitate bicycle and pedestrian travel.
Land Use and Transportation Element	
T2.1	**Encourage Transit-Oriented Development.** Transit-oriented development should be encouraged at existing or proposed transit nodes, defined by the convergence of two or more modes of public transit such as BART, bus, shuttle service, light rail or electric trolley, ferry, and inter-city or commuter rail.
T2.2	**Guiding Transit-Oriented Development.** Transit-oriented developments should be pedestrian oriented, encourage night and day time use, provide the neighborhood with needed goods and services, contain a mix of land uses, and be designed to be compatible with the character of surrounding neighborhoods.
T2.5	**Linking Transportation and Activities.** Link transportation facilities and infrastructure improvements to recreational uses, job centers, commercial nodes, and social services (i.e., hospitals, parks, or community centers).
T3.2	**Promoting Strategies to Address Congestion.** The City should promote and participate in both local and regional strategies to manage traffic supply and demand where unacceptable levels of service exist or are forecast to exist.
T3.5	**Including Bikeways and Pedestrian Walks.** The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
T4.1	**Incorporating Design Features for Alternative Travel.** The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.
Housing Element	
7.2	**Minimize Energy Consumption.** Encourage the incorporation of energy conservation design features in existing and future residential development beyond minimum standards required by State building code.
7.3	**Encourage Development that Reduces Carbon Emissions.** Continue to direct development toward existing communities and encourage infill development at densities that are higher than—but compatible with-- the surrounding communities. Encourage development in close proximity to transit, and with a mix of land uses in

TABLE 4.7-6 OAKLAND GENERAL PLAN POLICIES RELEVANT TO GREENHOUSE GAS EMISSIONS AND THE PROPOSED PROJECT

Policy No.	Text
	the same zoning district, or on the same site, so as to reduce the number and frequency of trips made by automobile.
7.4	**Minimize Environmental Impact from New Housing.** Work with developers to encourage construction of new housing that, where feasible, reduces the footprint of the building and landscaping, preserves green spaces, and supports ecological systems.

Source: City of Oakland, *City of Oakland General Plan, Open Space, Conservation, and Recreation Element* (June 1996); *Land Use and Transportation Element* (March 1998); and *Housing Element* (December 2014).

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to GHG emissions in Oakland. Chapter 15.33, *Residential Rooftop Solar Requirements*, includes regulations to adopt an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 (Chapter 521, Statutes 2014). Section 15.33.070, *Requirements*, establishes the requirements for solar energy systems imposed by State and local law for residential rooftops. Chapter 15.35, *Green Building Requirements for City Building Projects and Traditional Public Work Projects*, sets out the criteria for the integration of green building strategies in public City buildings and traditional public works projects. Section 15.35.040, *Green Building Practices for City Building Projects*, establishes that all covered City building projects shall meet a minimum LEED "Silver" rating under the LEED Rating System to reduce operating and maintenance costs in all City facilities. Section 15.35.045, *Green Building Practices for Traditional Public Works Projects*, states that Public Works Agency shall include the best green building practices applicable in the project specifications. Section 15.35.046, *Promoting Green Building Practices in Development Projects*, encourages green building strategies in private development projects, such as free services provided by the Oakland Energy Partnership's Energy Efficiency Design Assistance Program and free green building technical assistance and grants. Chapter 15.37, *All-Electric Construction in Newly Constructed Buildings*, sets forth the requirements for new buildings to use a permanent supply of electricity as the source of energy for all space heating, water heating (including pools and spas), cooking appliances, and clothes drying appliances, and has no natural gas or propane plumbing installed in the building. Section 15.37.030, *Requirement for all-electric construction in newly constructed buildings,* describes the specific requirements for new buildings.

OMC Chapter 18.02, *Sustainable Green Building Requirements for Private Development*, is intended to promote economic development and enhance the welfare of City occupants through integration of environmentally sustainable strategies in building construction and landscapes and sets standards to minimize the use of natural resources and production of waste. Article III, *Green Building Compliance Standards*, of this OMC chapter states that all buildings or projects must comply with the 2022 California Building Energy Efficiency Standards (Title 24, Part 6) of the California Building Code.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated

into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCA is related to reducing GHG emissions and is applicable to the proposed project:

- SCA-41. Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist: 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.
  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.

- SCA-81. Plug-In Electric Vehicle (PEV) Charging Infrastructure: The applicant shall submit, for review and approval of the Building Official and the Zoning Manager, plans that show the location of parking spaces equipped with full electrical circuits designated for future PEV charging (i.e., "PEV-Ready) per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-Ready parking spaces.

Oakland 2030 Equitable Climate Action Plan

In July 2020, Oakland City Council unanimously voted to adopt the *2030 Equitable Climate Action Plan* (ECAP).[31] The 2030 ECAP establishes actions that the City and its partners will take to equitably reduce Oakland's climate emissions and adapt to a changing climate. The ECAP was developed pursuant to City Council's adopted 2030 GHG emission-reduction target of 56 percent relative to 2005 levels, as well as Oakland's 2018 Climate Emergency and Just Transition Resolution. Oakland's City Council also adopted a 2045 Carbon Neutrality Goal, calling for a dramatic reduction in Oakland's GHG emissions and "deep decarbonization" of the building and transportation sectors by 2045. This follows the previous reduction target of 36 percent by 2020.

4.7.2.3 EXISTING CONDITIONS

California's GHG Sources and Relative Contribution

In 2021, the statewide GHG emissions inventory was updated for 2000 to 2019 emissions using the GWPs in IPCC's AR4.[32] Based on these GWPs, California produced 418.2 $MMTCO_2e$ GHG emissions in 2019.

[31] City of Oakland, July 2020, *Oakland 2030: Equitable Climate Action Plan*, https://cao-94612.s3.amazonaws.com/documents/Oakland-ECAP-07-24.pdf, accessed October 24, 2022.

[32] Intergovernmental Panel on Climate Change, 2013, *Fifth Assessment Report: Climate Change 2013: The Physical Science Basis*, https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf, accessed October 24, 2022.

California's transportation sector was the single largest generator of GHG emissions, producing 39.7 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.1 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (10.5 percent), agriculture and forestry (7.6 percent), high GWP gases (4.9 percent), and recycling and waste (2.1 percent).[33]

Since the peak level in 2004, California's GHG emissions have generally followed a decreasing trend. In 2016, California statewide GHG emissions dropped below the AB 32 target for year 2020 of 431 $MMTCO_2e$ and have remained below this target since then. In 2019, emissions from routine GHG-emitting activities statewide were almost 13 $MMTCO_2e$ lower than the AB 32 target for year 2020. Per capita GHG emissions in California have dropped from a 2001 peak of 14.0 $MTCO_2e$ per person to 10.5 $MTCO_2e$ per person in 2019, a 25 percent decrease.

Transportation emissions continued to decline in 2019 statewide as they had done in 2018, with even more substantial reductions because of a significant increase in renewable diesel. Since 2008, California's electricity sector has followed an overall downward trend in emissions. In 2019, solar power generation continued its rapid growth since 2013. Emissions from high-GWP gases made up 4.9 percent of California's emissions in 2019. This continues the increasing trend as the gases replace ozone-depleting substances being phased out under the 1987 Montreal Protocol. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) has declined 45 percent since the 2001 peak, though the state's gross domestic product grew 63 percent during this period.[34]

Project Site

The project site is undeveloped and does not currently generate GHG emissions.

4.7.3 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant GHG emissions impact if it would:

1. For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO_2e annually. *[NOTE: Stationary sources are projects that require a BAAQMD permit to operate]*
2. For a project involving a land use development, fail to demonstrate consistency with the 2030 Equitable Climate Action Plan (ECAP) adopted by the City Council on July 28, 2020. *[NOTE: 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) Committing to all of the GHG emissions-reductions strategies described on the ECAP Consistency Checklist, or

[33] California Air Resources Board, July 2021, *California Greenhouse Gas 2000-2019: Trends of Emissions and Other Indicators*, https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf, accessed October 24, 2022.

[34] California Air Resources Board, July 2021, *California Greenhouse Gas 2000-2019: Trends of Emissions and Other Indicators*, https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf, accessed October 24, 2022.

(b) Complying 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. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to GHG emissions.

4.7.3.1 AIR DISTRICT DRAFT JUSTIFICATION REPORT

Based on the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the methodology for assessing GHG impacts should be based on the latest version of the BAAQMD's CEQA Guidelines. In April 2022, BAAQMD adopted the *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans* (Justification Report).[35] Land use development projects include residential, commercial, industrial, and public land use facilities. Direct sources of emissions may include on-site combustion of energy, such as natural gas used for heating and cooking, emissions from industrial processes (not applicable for most land use development projects), and fuel combustion from mobile sources. Note, as described in Chapter 3, *Project Description*, of this Draft Environmental Impact Report (EIR), the proposed project would be 100 percent electric. Indirect emissions are emissions produced off-site from energy production, water conveyance due to a project's energy use and water consumption, and non-biogenic emissions from waste disposal. Biogenic CO_2 emissions are not included in the quantification of a project's GHG emissions, because biogenic CO_2 is derived from living biomass (e.g., organic matter present in wood, paper, vegetable oils, animal fat, food, animal, and yard waste) as opposed to fossil fuels. The BAAQMD Justification Report updates the thresholds of significance to determine whether a proposed project would have a significant cumulative impact on climate change (CEQA Guidelines Sections 15064[h] and 15064.4[b]).

To reach California's GHG emissions target under SB 32 and long-term goal of carbon neutrality by 2045, BAAQMD identified in its Justification Report that projects that implement the following best management practices would contribute their fair share of what will be required to achieve the state's long-term climate goals:

A. Projects must include, at a minimum, the following project design elements:

1. Buildings

a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).

b. The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2. Transportation

[35] Bay Area Air Quality Management District, April 2022, *CEQA Thresholds Justification Report*, https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en, accessed October 24, 2022.

a. Achieve compliance with electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

b. Achieve a reduction in project-generated VMT below the regional average consistent with the current version of the California Climate Change Scoping Plan or meet a locally adopted SB 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA.

B. OR, projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

At the time publication of the Notice of Preparation (June 9, 2020), BAAQMD's current guidance, the 2017 BAAQMD *CEQA Air Quality Guidelines*, included only operational GHG emissions significance thresholds under CEQA and no construction related GHG emissions significance thresholds, which are one-time, short-term emissions and therefore would not significantly contribute to the long-term cumulative GHG emissions impacts of the proposed project. While BAAQMD's 2022 *CEQA Air Quality Guidelines* were updated in April 2023, only the operational GHG emissions significance thresholds under CEQA were updated, and no construction-related GHG emissions significance thresholds were added.[36] Regardless, the BAAQMD *CEQA Air Quality Guidelines* that were in place at the time of publication of the Notice of Preparation (June 9, 2020) were utilized for this GHG analysis.[37]

4.7.3.2 OAKLAND ECAP

CEQA Guidelines Section 15183.5, *Tiering and Streamlining the Analysis of Greenhouse Gas Emissions*, allows for lead agencies to analyze and mitigate the significant effects of GHG emissions at a programmatic level. Pursuant to CEQA Guidelines Section 15183.5, later project-specific environmental documents may tier from and/or incorporate by reference the GHG reduction plan so long as it includes the following plan elements:

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;

[36] Bay Area Air Quality Management District, April 2023, *CEQA Guidelines*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed June 22, 2023.

[37] Bay Area Air Quality Management District, April 2022, *CEQA Thresholds Justification Report*, https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en, accessed October 24, 2022.

- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
- Be adopted in a public process following environmental review.

The Oakland 2030 ECAP was adopted in a public process in July 2020 and was determined to be exempt from CEQA. The City updates Oakland's GHG inventory every two years. The 2030 ECAP provides an updated emissions inventory based on the latest community protocols and GWPs. The ECAP provides emissions forecasts for 2030 and 2050 and established GHG emissions targets for years 2030 and 2050 consistent with SB 32 and EO S-03-05. The 2030 ECAP identified State and local measures to reduce GHG emissions and quantified GHG reductions associated with these measures. The 2030 ECAP identified that, with implementation of the GHG reduction measures, the 2030 ECAP provides a flexible path to reduce the community's GHG emissions by 60 percent below 2005 levels by year 2030 and 84 percent below 2005 levels by 2050.[38]

Consequently, the 2030 ECAP is a qualified GHG reduction plan for near-term projects under SB 32. Although the 2030 ECAP was adopted prior to AB 1279 in September 2022, the ECAP provides a pathway to these long-range targets. The proposed residential development is consistent with the land use designations; therefore, emissions associated with project development are included in GHG forecast in the ECAP. The proposed project's buildout horizon is prior to the sunset year for SB 32 of 2030. Thus, the proposed project's GHG emissions impacts are evaluated based on consistency with the 2030 ECAP, in accordance with CEQA Guidelines Section 15183.5.

4.7.4 IMPACT DISCUSSION

GHG-1 The proposed project would not involve a stationary source.

Stationary sources are projects that require a BAAQMD permit to operate. The proposed project is a residential development and would not require a BAAQMD permit to operate. Therefore, the proposed project does not involve a stationary source and there would be *no impact*.

Significance without Mitigation: No impact.

[38] City of Oakland, July 2020, *Oakland 2030: Equitable Climate Action Plan*, https://cao-94612.s3.amazonaws.com/documents/Oakland-ECAP-07-24.pdf, accessed October 24, 2022.

GHG-2 The proposed project would be consistent with the Oakland 2030 Equitable Climate Action Plan and would not conflict with other applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

In addition to a consistency analysis with the Oakland ECAP, the following discusses consistency with other applicable plans adopted for the purpose of reducing GHG emissions, which include CARB's Scoping Plan and MTC/ABAG's *Plan Bay Area* 2050.

Oakland ECAP

A project does not generate enough GHG emissions on its own to influence global climate change; therefore, this section measures the proposed project's contribution to the cumulative environmental impact associated with GHG emissions. The City's 2030 ECAP is a qualified GHG reduction plan. Therefore, the proposed project's GHG emission impacts are evaluated based on consistency with the ECAP in accordance with CEQA Guidelines Section 15183.5.

In July 2020, the Oakland ECAP was developed and adopted pursuant to City Council's adopted 2030 GHG emission-reduction target of 65 percent relative to 2005 levels, as well as Oakland's 2018 Climate Emergency and Just Transition Resolution.[39] The ECAP has provided emissions forecasts for 2030 and 2050 and established GHG emissions targets for years 2030 and 2050, consistent with SB 32 and EO S-03-05. The ECAP identified state and local measures to reduce GHG emissions and quantified GHG reductions associated with these measures. A consistency analysis with the proposed project to the applicable policies in the ECAP is shown in Table 4.7-7, *Consistency with the City of Oakland Equitable Climate Action Plan.*

TABLE 4.7-7 CONSISTENCY WITH THE CITY OF OAKLAND EQUITABLE CLIMATE ACTION PLAN

Sector	Consistency Analysis
Transportation and Land Use	
1. Is the proposed project substantially consistent with the City's overall goals for land use and urban form, and/or taking advantage of allowable density and/or floor area ratio standards in the Oakland General Plan?	**Consistent.** The project site is zoned Hillside Residential (RH-1) to create and maintain residential areas on hillside lots. This zoning allows for single-family dwellings on lots of 1 acre, which the proposed project is consistent with. See Chapter 4.10, *Land Use and Planning*, of this Draft EIR for a detailed discussion.
2. For developments in "Transit Accessible Areas" as defined in the Oakland Planning Code, would the proposed project provide: (i) less than half the maximum allowable parking, (ii) the minimum allowable parking, or (iii) take advantage of available parking reductions?	**Not Applicable.** The proposed project is not in a "Transit Accessible Area."

[39] City of Oakland, July 2020, *Oakland 2030: Equitable Climate Action Plan*, https://cao-94612.s3.amazonaws.com/documents/Oakland-ECAP-07-24.pdf, accessed October 24, 2022.

TABLE 4.7-7 CONSISTENCY WITH THE CITY OF OAKLAND EQUITABLE CLIMATE ACTION PLAN

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).	**Not Applicable.** The proposed project would not include construction of a structured parking lot.
4. For projects that are subject to a Transportation Demand Management Program, would the project include transit passes for employees and/or residents?	**Not Applicable.** The proposed project would not create a substantial increase in daily vehicle trips and would not be subject to a Transportation Demand Management Program.
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 carshare program, guaranteed ride-home programs)	**Not Applicable.** The proposed project would not create a substantial increase in daily vehicle trips and would not be subject to incorporate optional Transportation Demand Management measures.
6. Does the proposed project comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements (Chapter 15.04 of the Oakland Municipal Code), if applicable?	**Not Applicable.** OMC Chapter 15.04, Part 11, Section 15.04.3.11010, *CGBSC Section 4.106.4.2 amended*, is applicable to new multifamily and nonresidential buildings. The proposed project would not be subject to the City's PEV charging infrastructure requirements because the proposed project would construct ten new single-family homes.
7. Would the proposed project reduce or prevent the direct displacement of residents and essential businesses? For residential projects, would the proposed project comply with SB 330, if applicable?	**Not Applicable.** The proposed project would not displace residents or essential businesses since the proposed homes will be built on an undeveloped strip of land in an existing neighborhood.
8. Would the proposed project prioritize sidewalk and curb space consistent with the City's adopted Bike and Pedestrian Plans? (The proposed 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 Oakland Planning Code requirements, limited frontage or other constraints.)	**Not Applicable.** The proposed new homes would be built on a new side street off of Campus Drive, which has existing sidewalks on both sides. Furthermore, Class II bike lane improvements would occur near the project area based on the 2019 Oakland Bike Plan.
Buildings	
9. Does the proposed project not create any new natural gas connections/hook-ups?	**Consistent.** The proposed project would not propose any natural gas connections or hookups. As described in Chapter 3, *Project Description*, of this Draft EIR, the project applicant has opted for a 100 percent electric project in compliance with OMC Chapter 15.37. Furthermore, each home would include solar panels, electric HVAC heat pump units, and electric hot water heaters.
10. Does the proposed project comply with the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code), if applicable?	**Consistent.** The proposed project would meet the City's Green Building Ordinance, latest Title 24 building standards, and related local codes.
11. For retrofits of City-owned or City-controlled buildings, would the proposed project be all-electric, eliminate gas infrastructure from the	**Not Applicable.** The ten new homes would not be City owned or controlled.

TABLE 4.7-7 CONSISTENCY WITH THE CITY OF OAKLAND EQUITABLE CLIMATE ACTION PLAN

building, and integrate energy storage wherever technically feasible and appropriate?	
12. Would the proposed 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)?	**Not Applicable.** Proposed project construction activities would not require demolition.
City Leadership	
13. For City projects, have opportunities to eliminate/minimize fossil fuel dependency been analyzed in project design and construction?	**Not Applicable.** The ten new private homes are not considered a City project.
Adaptation	
14. For new projects in the Designated Very High Wildfire Severity Zone, would the proposed 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?	**Consistent.** The proposed project would continue to create defensible spaces around the new homes. All vegetation in the proposed developed areas would be removed during the grading process and replaced with fire-resistant plants, consistent with what is required under the Vegetation Management Plan. See Chapter 4.17, *Wildfire*, of this Draft EIR for a detailed discussion.
Carbon Removal	
15. Would the proposed 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 Oakland Planning Code, if applicable and feasible given competing site constraints?	**Consistent.** The proposed project would abide by the Tree Preservation Ordinance and Planning Code and would remove an estimated 77 trees and plant 145 new trees that are drought tolerant. See Chapter 4.3, *Biological Resources*, of this Draft EIR for a detailed discussion.
16. Does the proposed project comply with the Creek Protection, Stormwater Management, and Discharge Control Ordinance (Chapter 13.16 of the Oakland Municipal Code), as applicable?	**Consistent.** The applicant has prepared and submitted for the City review a creek protection and stormwater management and discharge plan. See Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR for a detailed discussion.

Source: City of Oakland, July 2020, *Oakland 2030: Equitable Climate Action Plan*, https://cao-94612.s3.amazonaws.com/documents/Oakland-ECAP-07-24.pdf, accessed October 24, 2022.

As identified in the Table 4.7-7, the proposed project would be consistent with the strategies in the City's ECAP. The proposed project would minimize GHG emissions from the residential building sector by committing to 100 percent electric housing. EBCE would provide 100 percent carbon-neutral power to residents in Oakland under the Renewable 100 Plan. Furthermore, per SCA-41, *Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist*, the proposed project would be required to be implement all the measures in the ECAP Consistency Checklist submitted during the Planning entitlement phase. Therefore, impacts of the proposed project would be *less than significant*.

CARB Scoping Plan

CARB's Climate Change Scoping Plan outlines the State's strategies to reduce GHG emissions in accordance with the targets established under AB 32, SB 32, EO S-03-05, and EO B-55-18. The Scoping

Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Statewide strategies to reduce GHG emissions in the 2017 Climate Change Scoping Plan include: implementing SB 350, which expands the RPS to 50 percent by 2030 and doubles energy-efficiency savings; expanding the LCFS to 18 percent by 2030; implementing the Mobile Source Strategy to deploy ZEV buses and trucks; implementing the Sustainable Freight Action Plan; implementing the Short-Lived Climate Pollutant Reduction Strategy, which reduces methane and hydrofluorocarbons to 40 percent below 2013 levels by 2030 and black carbon emissions to 50 percent below 2013 levels by 2030; continuing to implement SB 375; creating a post-2020 Cap-and-Trade Program; and developing an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Statewide strategies to reduce GHG emissions include the LCFS, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the CAFE standards, and other early action measures as necessary to ensure the State is on target to achieve the GHG emissions reduction goals of AB 32, SB 32, EO S-05-03, and EO B-55-18. In addition, new buildings are required to comply with the current Building Energy Efficiency Standards and CALGreen. The proposed project would comply with these GHG emissions-reduction measures since they are statewide strategies. The project's GHG emissions would be reduced from compliance with statewide measures that have been adopted since AB 32, SB 32, EO S-03-05, and EO B-55-18 were adopted. Therefore, impacts would be *less than significant*.

Plan Bay Area

Plan Bay Area 2050 is the Bay Area's Regional Transportation Plan/Sustainable Community Strategy that identifies the sustainable vision for the Bay Area.[40] To achieve MTC/ABAG's sustainable vision for the Bay Area, the *Plan Bay Area 2050* land use concept plan for the region concentrates the majority of new population and employment growth in the region in PDAs and in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger VMT. While the project site is within 0.4 miles of the nearest bus stop at Merritt College, it is not in an identified PDA. However, population growth associated with the proposed project is consistent with Oakland's General Plan projections and would not increase the overall City buildout beyond the Oakland General Plan Housing Element 2023-2031 (see Chapter 4.12, *Population and Housing*, of this Draft EIR). The proposed project would result in an increase in land use intensity in a portion of the city that has access to existing infrastructure and services. Therefore, the proposed project would not conflict with the land use concept plan in *Plan Bay Area 2050*, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

[40] Association of Bay Area Governments and the Metropolitan Transportation Commission, October 2021, Plan Bay Area 2050, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed October 24, 2022.

GHG-3 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to greenhouse gas emissions.

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact Discussion GHG-1 and Impact Discussion GHG-2 are not project-specific impacts to global warming, but the proposed project's contribution to a cumulative impact. As discussed under Impact Discussions GHG-1 and GHG-2, the proposed project does not involve a stationary source and implementation would be consistent with the City's 2030 ECAP. Therefore, project-related GHG emissions and their contribution to global climate change would not be cumulatively considerable, and GHG emissions impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.8 HAZARDS AND HAZARDOUS MATERIALS

This chapter includes an evaluation of the potential environmental consequences related to hazards and hazardous materials from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing hazards and hazardous materials in the vicinity of the proposed project.

The potential for impacts of toxic air emissions from construction equipment and wildland-fire-related impacts are considered in Chapter 4.2, *Air Quality,* and Chapter 4.17, *Wildfire*, respectively*,* of this Draft Environmental Impact Report (EIR).

4.8.1 ENVIRONMENTAL SETTING

4.8.1.1 REGULATORY FRAMEWORK

Federal Regulations

United States Environmental Protection Agency

The United States Environmental Protection Agency (USEPA) is the primary federal agency that regulates hazardous materials and waste. In general, the USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress. The agency is responsible for researching and setting national standards for a variety of environmental programs, delegating the responsibility for issuing permits, and monitoring and enforcing compliance by states and Native American tribes. USEPA programs promote handling hazardous wastes safely, cleaning up contaminated land, and reducing waste volumes through such strategies as recycling. California falls under the jurisdiction of USEPA Region 9. Under the authority of the Resource Conservation and Recovery Act (RCRA) and in cooperation with State and tribal partners, the USEPA Region 9 Waste Management and Superfund Divisions manage programs for site environmental assessment and cleanup, hazardous and solid waste management, and underground storage tanks.

United States Department of Transportation

The United States Department of Transportation (USDOT) has the regulatory responsibility for the safe transportation of hazardous materials between states and internationally. The USDOT regulations govern all means of transportation, except for packages shipped by mail, which are covered by United States Postal Service regulations. The federal RCRA of 1976 (described following) imposes additional standards for the transport of hazardous wastes.

Resource Conservation and Recovery Act

Federal hazardous waste laws are generally promulgated under the RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984. These laws provide for the “cradle to grave” regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed.

The Department of Toxic Substance Control (DTSC) is responsible for implementing the RCRA program as well as California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program, the California Environmental Protection Agency (CalEPA) has in turn delegated enforcement authority to the Alameda County Department of Environmental Health for State law regulating hazardous waste producers or generators.[1]

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act, also known as SARA Title III, was enacted in October 1986. This law requires State and local governments to plan for chemical emergencies. Reported information is made publicly available so that interested parties will be informed about potentially dangerous chemicals in their community. Sections 301 through 312 of the Act are administered by USEPA's Office of Emergency Management. USEPA's Office of Information Analysis and Access implements the Act's Section 313 program. In California, SARA Title III is implemented through California Accidental Release Prevention program.

Hazardous Materials Transportation Act

The USDOT regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations. State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). The California State Fire Marshal's Office has oversight authority for hazardous materials liquid pipelines. The California Public Utilities Commission has oversight authority for natural gas pipelines in California. These agencies also govern permitting for hazardous materials transportation.

State Regulations

California Environmental Protection Agency

One of the primary State agencies that regulate hazardous materials is CalEPA. CalEPA is authorized by the USEPA to enforce and implement certain federal hazardous materials laws and regulations. DTSC, a department of CalEPA, protects California and Californians from exposure to hazardous waste, primarily under the authority of the RCRA and the California Health and Safety Code.[2] DTSC requirements include the need for written programs and response plans, such as hazardous materials management plans. DTSC programs include dealing with aftermath cleanups of improper hazardous waste management; evaluation of samples taken from sites; enforcement of regulations regarding use, storage, and disposal of hazardous materials; and encouragement of pollution prevention.

[1] Alameda County Department of Environmental Health, 2020, https://deh.acgov.org/hazmat/index.page?, accessed December 11, 2020.

[2] Health and Safety Code, Chapter 6.5: Hazardous Substance Account (Section 25100 et seq.) and Chapter 6.8: Hazardous Waste Control Law (Section 25300 et seq.).

California Office of Emergency Services

The California Office of Emergency Services (Cal OES) was established as part of the Governor's Office on January 1, 2009. It was created pursuant to Assembly Bill 38, which merged the duties, powers, purposes, and responsibilities of the former Governor's Emergency Management Agency with those of the Governor's Office of Homeland Security. Cal OES is responsible for the coordination of overall State agency response to major disasters in support of local government. The agency is responsible for ensuring the State's readiness to respond to and recover from all hazards—natural, man-made, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

California Department of Transportation and California Highway Patrol

Caltrans and the CHP are the two State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies. Caltrans manages more than 50,000 miles of California's highways and freeways, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases on highways, freeways, and intercity rail lines.

The CHP enforces hazardous materials and hazardous waste labeling and packing regulations designed to prevent leakage and spills of materials in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to ensure regulatory compliance. In addition, the State of California regulates the transportation of hazardous waste originating or passing through the state.

Common carriers are licensed by the CHP, pursuant to Section 32000 of the California Vehicle Code. This section requires licensing every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of the business in the delivery of hazardous materials.

California Hazardous Waste Source Reduction and Management Review Act

Senate Bill (SB) 14 is the Hazardous Waste Source Reduction and Management Review Act of 1989. SB 14 requires hazardous waste generators to consider source reduction as the preferred method of managing hazardous waste. Source reduction is preferable over recycling and treatment options because it avoids waste generation costs and management liability. Source reduction also provides the best protection for public health and the environment.

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is found in Title 24, Part 2 of the California Code of Regulations. The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis and may be subject to

further modification based on local conditions. Commercial and residential buildings are plan checked by local city and county building officials for compliance with the typical fire safety requirements of the CBC, including the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors and building materials; and the clearance of debris and vegetation near occupied structures in wildfire hazard areas.

California Fire Code

The California Fire Code incorporates, by adoption, the International Fire Code of the International Code Council with California amendments. This is the official Fire Code for the State and all political subdivisions. It is in Part 9 of Title 24 of the California Code of Regulations. The California Fire Code is revised and published approximately every three years by the California Building Standards Commission.

Senate Bill 1889, Accidental Release Prevention Law

On January 31, 1994, the USEPA promulgated a final rule under provisions of the Clean Air Act for the prevention of accidental releases of hazardous substances. The rule establishes a list of chemicals and threshold quantities that identify facilities subject to subsequent accident prevention regulations. In October 1996, California passed SB 1889, now incorporated into the Health and Safety Code as Sections 25531 to 25534.3. This bill established the merging of the federal and State programs for the prevention of accidental releases of regulated toxic and flammable substances. Cal OES has adopted regulations to eliminate the need for two separate and distinct risk management programs. The incorporation of the federal and State requirements has been designated the California Accidental Release Prevention program.

Regional Regulations

San Francisco Bay Regional Water Quality Control Board

The Porter-Cologne Water Quality Act established the State Water Resources Control Board (SWRCB) and divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB). The San Francisco Bay RWQCB governs Region 2 and regulates water quality in the city of Oakland. The San Francisco Bay RWQCB has the authority to require groundwater investigations and/or remedial action if the quality of groundwater or surface waters of the State are threatened.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) has primary responsibility for control of air pollution from sources other than motor vehicles and consumer products. The latter are typically the responsibility of CalEPA and the California Air Resources Board. BAAQMD is responsible for preparation of attainment plans for nonattainment criteria pollutants; control of stationary air pollutant sources; and issuance of permits for activities, including demolition and renovation activities affecting asbestos-containing materials (District Regulation 11, Rule 2) and lead (District Regulation 11, Rule 1).

Local Regulations

Oakland General Plan

The Safety Element of the Oakland General Plan aims to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from large-scale hazards, including hazards from use and transport of hazardous materials. Table 4.8-1, *Oakland General Plan Policies Relevant to Hazards and Hazardous Materials and the Proposed Project*, outlines Oakland General Plan policies and guidelines related to hazards and hazardous materials.

TABLE 4.8-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO HAZARDS AND HAZARDOUS MATERIALS AND THE PROPOSED PROJECT

Safety Element	
HM-1	Minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage and disposal of hazardous materials.
HM-2	Reduce the public's exposure to toxic air contaminants through appropriate land use and transportation strategies.

Source: City of Oakland, November 2004, *City of Oakland General Plan, Safety Element.*

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to hazards and hazardous materials in Oakland. In Chapter 8.12, *Hazardous Materials*, of the OMC, the City assumes the authority and responsibility for the implementation of Chapter 6.95 of the California Health and Safety Code (Health and Safety Code Section 25500 et seq.) as to the handling of the hazardous materials in the city. OMC Chapter 8.42, *Certified Unified Program Agency (CUPA)*, establishes the City as the CUPA for the city and assumes authority and responsibility for the administration and enforcement of the unified hazardous waste and hazardous materials management regulatory program in the city. OMC Section 8.42.105, *Hazardous Materials Assessment Report and Remediation Plan*, requires the applicant of a project to make a written disclosure, within 10 days of its application, of whether that project will handle, store, or produce any substance presenting a threat to public health listed pursuant to Section 44321 of the California Health and Safety Code. The Administrator has the discretion to require the project applicant to prepare a hazardous materials assessment report and remediation plan.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCA is related to hazardous materials and is applicable to the proposed project:

- SCA-43. Hazardous Materials Related to Construction: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:

a) Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;
b) Avoid overtopping construction equipment fuel gas tanks;
c) During routine maintenance of construction equipment, properly contain and remove grease and oils;
d) Properly dispose of discarded containers of fuels and other chemicals;
e) Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and
f) If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

4.8.1.2 EXISTING CONDITIONS

General Plan Safety Element Planning Area

As described in the Safety Element Chapter 7, *Hazards by Area*, the project site is in the Upper Hills planning area of Oakland, which is essentially the same as the South Hills planning area identified in the Oakland General Plan's Land Use and Transportation Element.[3, 4] This area is bounded roughly by Contra Costa County and the East Bay Regional Park District open spaces to the north and east, State Route 13 and Interstate 580 to the west and south, and the city of Berkeley to the west. Most of the Upper Hills planning area is zoned for residential and open space land uses. According to the Safety Element, the Upper Hills planning area is not an area with known hazardous material concerns.

Airport

The nearest airport to the project site is the Oakland International Airport, approximately 4.5 miles to the southwest.[5] The proposed project is not in the Airport Land Use Compatibility Plan of the Oakland International Airport. Additionally, the proposed project is not within the vicinity of a private airstrip.

[3] City of Oakland, March 1998, *City of Oakland General Plan, Land Use and Transportation Element*.
[4] City of Oakland, November 2004, *City of Oakland General Plan, Safety Element.*
[5] Airnav.com, 2022, Airport Information, http://www.airnav.com/airports, accessed on November 4, 2022.

Schools

The nearest school to the project site is Merritt Community College to the north across Campus Drive. The closest Merritt Community College school building is approximately 0.10 miles (550 feet) north of the project site.

Hazardous Materials Sites

California Government Code Section 65962.5 requires the CalEPA to compile, maintain, and update specified lists of hazardous material release sites. The California Environmental Quality Act (CEQA; California PRC Section 21092.6) requires the lead agency to consult the lists compiled pursuant to Government Code Section 65962.5 to determine whether the project and any alternatives are identified on any of the following lists:

- USEPA National Priorities List. The USEPA's National Priorities List includes all sites under the USEPA's Superfund program, which was established to fund cleanup of contaminated sites that pose risks to human health and the environment.
- USEPA Comprehensive Environmental Response, Compensation, and Liability Information System and Archived Sites. The USEPA's Comprehensive Environmental Response, Compensation, and Liability Information System includes a list of 15,000 sites nationally identified as hazardous sites. This would also involve a review for archived sites that have been removed from the system due to No Further Remedial Action Planned status.
- USEPA Resource Conservation and Recovery Act Information System. The Resource Conservation and Recovery Act Information System is a national inventory system about hazardous waste handlers. Generators, transporters, handlers, and disposers of hazardous waste are required to provide information for this database.
- DTSC Cortese List. The DTSC maintains the Hazardous Waste and Substances Sites (Cortese) list as a planning document for use by the State and local agencies to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. This list includes the Site Mitigation and Brownfields Reuse Program Database.
- DTSC HazNet. The DTSC uses this database to track hazardous waste shipments.
- SWRCB Leaking Underground Storage Tank Information System. Through the Leaking Underground Storage Tank Information System, the SWRCB maintains an inventory of Underground Storage Tanks and leaking Underground Storage Tanks, which tracks unauthorized releases.

The required lists of hazardous material release sites are commonly referred to as the "Cortese List." Because the statute was enacted more than 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented, so in some cases the information required in the Cortese List does not exist. Those requesting a copy of the Cortese Lists are now referred directly to the appropriate information resources on internet websites hosted by the boards or departments referenced in the statute, including DTSC's online EnviroStor database and the SWRCB's online GeoTracker database. These two databases include hazardous material release sites, along with other categories of sites or facilities specific to each agency's jurisdiction.

A search of the online databases on October 6, 2022, did not identify any hazardous materials sites on the 20-acre project site.[6, 7] The closest active hazardous materials site is the now-closed Leona Heights Sulphur Mine, 0.5 miles northwest of the project site.

4.8.2 STANDARDS OF SIGNIFICANCE

Impacts related to wildland fires and emergency response/evacuation are fully discussed in Chapter 4.17, *Wildfire*, of this Draft EIR. Therefore, the following standards are not discussed in this chapter:

- Exposure of people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.
- Fundamental impairment of the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan.

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant impact related to hazards and hazardous materials if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. 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.
3. Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors. *[Note: Per the BAAQMD CEQA Guidelines, evaluate whether the project would result in persons being within the Emergency Response Planning Guidelines (ERPG) exposure level 2 for acutely hazardous air emissions either by siting a new source or a new sensitive receptor. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers]*
4. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
5. 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.
6. 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.

[6] Department of Toxic Substances Control, 2022, Envirostor, https://www.envirostor.dtsc.ca.gov/public/map/, accessed October 6, 2022.

[7] State Water Resources Control Board, 2022, Geotracker, https://geotracker.waterboards.ca.gov/, accessed October 6, 2022.

7. Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and would result in a significant safety hazard for people residing or working in the project area.
8. Be located within the vicinity of a private airstrip and would result in a significant safety hazard for people residing or working in the project area.
9. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to hazards and hazardous materials.

4.8.3 IMPACT DISCUSSION

HAZ-1 The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction at the project site would require the use and transport of hazardous materials. Construction activities for the proposed project would include the use of materials such as fuels, lubricants, and greases in construction equipment and coatings used in construction. However, the materials would be commonplace to construction and would not be used in such quantities or stored in such a manner as to pose a significant safety hazard. During the construction period, Campus Drive would be utilized as the materials hauling route. At no time would this roadway be closed to through traffic. These activities would be temporary for the duration of construction. The proposed project would be required to comply with SCA-43, *Hazardous Materials Related to Construction*, to ensure that best management practices are implemented during construction.

As a residential development, operation of the proposed project would not involve routine transport, use, or disposal of hazardous materials. Project operation would involve the use of small amounts of hazardous materials for cleaning and maintenance purposes, such as cleansers, degreasers, pesticides, and fertilizers. These potentially hazardous materials would not be of a type or be present in sufficient quantities to pose a significant hazard to public health and safety or the environment. Furthermore, such substances would be used, transported, stored, and disposed of in accordance with applicable federal, State, and local laws, policies, and regulations.

In summary, the construction and operation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of significant quantities of hazardous materials, and this impact would be *less than significant*.

Significance without Mitigation: Less than significant.

HAZ-2 The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Construction at the project site would require the use and transport of hazardous materials. Improper use and transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and environment. All spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable State and local regulations. All contaminated waste would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility. Furthermore, strict adherence to all emergency response plan requirements in the Oakland Local Hazard Mitigation Plan would be required through the duration of the construction of each individual development project. The proposed project would be required to comply with SCA-43, *Hazardous Materials Related to Construction*, to ensure that best management practices are implemented during construction.

General uses within and around the proposed project development may result in the generation, storage, transportation, use, and disposal of hazardous substances in association with the various residential and nonresidential activities during project operation. Due to the residential nature of the proposed project, no hazardous materials would be used beyond common cleaning substances, building maintenance products, and other similar items. The City of Oakland provides free drop-off for hazardous materials such as fluorescent bulbs, paints, stains, solvents, thinners, adhesives, pesticides, cleaners, household garden and auto chemicals, spray cans, batteries, and electronic waste at the Household Hazardous Waste Facility at 2100 East 7th Street, Oakland. Additionally, the County of Alameda household hazardous waste program helps residents reuse, recycle, or responsibly manage residential hazardous waste and provides various options for safely and properly removing household hazardous wastes from their premises. The County of Alameda household hazardous waste program is offered as a free service to all Alameda County residents.[8] With existing federal, State, and local regulations, and oversight of hazardous materials, the risk to the public of the environment from upset and accident conditions involving the release of hazardous materials would represent a *less-than-significant* impact.

Significance without Mitigation: Less than significant.

HAZ-3 The proposed project would not create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors.

As described in Impact Discussions HAZ-1 and HAZ-2, the construction and operation of the proposed ten-unit residential project would not emit hazardous emissions or handle hazardous substances or waste that

[8]Alameda County StopWaste, 2022, Household Hazardous Waste, https://www.stopwaste.org/at-home/household-hazardous-waste, accessed February 11, 2022.

would pose a significant hazard to nearby residences or Merritt College. The proposed project would be required to comply with SCA-43, *Hazardous Materials Related to Construction*, to ensure that best management practices are implemented during construction, and the types of hazardous materials that are common for residential developments would not pose a significant hazard to the public. Accordingly, the construction and operation of the proposed development would not create a significant hazard to the public or the environment through the storage or use of acutely hazardous materials near sensitive receptors, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HAZ-4 The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

The only school within 0.25 miles of the proposed project is Merritt Community College. As described in Section 4.8.1.2, *Existing Conditions*, the closest Merritt Community College school building is approximately 0.10 miles (550 feet) north of the project site. As described in Impact Discussion HAZ-3, the construction and operation of the proposed ten-unit residential project would not emit hazardous emissions or handle hazardous substances or waste that would pose a significant hazard to Merritt College. The proposed project would be required to comply with SCA-43, *Hazardous Materials Related to Construction*, to ensure that best management practices are implemented during construction. Accordingly, impacts associated with hazards near schools would be *less than significant*.

Significance without Mitigation: Less than significant.

HAZ-5 The proposed project would not 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.

As stated in Section 4.8.1.2, *Existing Conditions*, the project site is not listed on a list of hazardous materials sites pursuant to Government Code Section 65962.5. The site consists of an undeveloped hillside property that is surrounded by residential development. Therefore, the proposed project would have *no impact* with regard to being listed as a hazardous materials site.

Significance without Mitigation: No impact.

HAZ-6	**The proposed project would not 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.**

As discussed in Chapter 3, *Project Description*, of this Draft EIR, the proposed Viewcrest Lane extends roughly 600 feet from Campus Drive to the end of the cul-de-sac. Because the proposed roadway would not exceed 600 feet in length, it would not need two emergency access routes, and the proposed project would have *no impact*.

Significance without Mitigation: No impact.

HAZ-7	**The proposed project would not be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and would result in a significant safety hazard for people residing or working in the project area.**

As stated in Section 4.8.1.2, *Existing Conditions*, the Oakland International Airport is 4.5 miles to the southwest of the project site, and the proposed project would not be located within the Airport Land Use Compatibility Plan of the Oakland International Airport. Therefore, there would be *no impact*.

Significance without Mitigation: No impact.

HAZ-8	**The proposed project would not be located within the vicinity of a private airstrip and would result in a significant safety hazard for people residing or working in the project area.**

As stated in Section 4.8.1.2, *Existing Conditions*, the proposed project is not within the vicinity of a private airstrip and thus would not result in a safety hazard to people working or residing in the area due to the proximity of an airport. Therefore, there would be *no impact*.

Significance without Mitigation: No impact.

HAZ-9	**The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to hazards and hazardous materials.**

The area considered for cumulative impacts is Alameda County, which is the service area for the Alameda County Department of Environmental Health, the affected CUPA. Other development projects throughout the county could use, store, transport, and dispose of increased amounts of hazardous materials, and thus could pose substantial risks to the public and the environment. However, the use, storage, transport, and

disposal of hazardous materials by other projects would conform with regulations of multiple agencies, as described in Section 4.8.1.1, *Regulatory Framework*.

The proposed project is located within 0.25 miles of a school, and construction at the project site would require the use and transport of hazardous materials. Improper use and transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and environment, but with implementation of Oakland SCA-43, *Hazardous Materials Related to Construction*, the impact would be reduced to less than significant. Therefore, the proposed project would not contribute to a cumulative impact associated with schools.

The proposed project area is not located within 2 miles of a public or private airport and is not within the Airport Land Use Compatibility Plan of the Oakland International Airport. Therefore, the proposed project would not contribute to a cumulative impact associated with its proximity to an airport.

Cumulative impacts would be *less than significant* after compliance with regulations, and impacts from the project would not be cumulatively considerable.

Significance without Mitigation: Less than significant.

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4.9 HYDROLOGY AND WATER QUALITY

This chapter includes an evaluation of the potential environmental consequences related to hydrology and water quality from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing hydrology and water quality in the vicinity of the proposed project.

This chapter is based, in part, on the *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development, Oakland, CA*, prepared by Clearwater Hydrology, dated March 27, 2021. See Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft Environmental Impact Report (EIR).[1]

4.9.1 ENVIRONMENTAL SETTING

4.9.1.1 REGULATORY FRAMEWORK

Federal Regulations

Clean Water Act

The federal Water Pollution Control Act of 1948 (or Clean Water Act [CWA]) is the principal statute governing water quality. It establishes the basic structure for regulating discharges of pollutants into the waters of the United States and gives the United States Environmental Protection Agency (USEPA)—or in the case of California, the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB)—authority to implement pollution-control programs. The statute's goal is to restore, maintain, and preserve the integrity of the nation's waters. The CWA regulates direct and indirect discharge of pollutants, sets water quality standards for all contaminants in surface waters, and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges; requires states to establish site-specific water quality standards; and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA also funded the construction of sewage treatment plants and recognized the need for planning to address nonpoint sources of pollution. Section 402 of the CWA requires a permit for all point source (a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel) discharges of any pollutant into waters of the United States.

Under federal law, the USEPA has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2) criteria that protect the designated uses. Section 304(a) requires the USEPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and

[1] Note that this report was prepared prior to the proposed project's name change to Viewcrest Townhomes.

welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use.

In California, the authority to either grant water quality certification or waive the requirement is delegated by the SWRCB to its nine RWQCBs. Additionally, the SWRCB and its RWQCBs are the designated authority to identify beneficial uses and adopt applicable water quality objectives. When water quality does not meet CWA standards and compromises designated beneficial uses of a receiving water body, Section 303(d) of the CWA requires that water body be identified and listed as "impaired." Once a water body has been designated as impaired, a Total Maximum Daily Load must be developed for the impairing pollutant(s). A total maximum daily load is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards, with a factor of safety included. Once established, the total maximum daily load allocates the loads among current and future pollutant sources to the water body.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program regulates municipal and industrial discharges to surface waters of the United States from their municipal separate storm sewer systems. Under the NPDES program, all facilities that discharge pollutants into waters of the United States are required to obtain an NPDES permit. Requirements for stormwater discharges are also regulated under this program.

The City of Oakland is subject to the waste discharge requirements of the Municipal Regional Stormwater Permit (MRP) NPDES Permit No. CAS612008 and Order No. R2-2022-0018. The MRP was issued on May 11, 2022. The Alameda County permittees include Alameda County, the Alameda County Flood Control and Water Conservation District, and 14 cities, including the City of Oakland. The permit governs a variety of activities in the city, such as industrial and commercial businesses, new development and redevelopment projects, construction sites, storm drain operation and maintenance, creek monitoring, pesticide applications, and illegal dumping of water and other pollution in the City's storm drain.

Under Provision C.3 of the MRP, the co-permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects. New development or redevelopment projects that create and/or replace 2,500 square feet or more of impervious surface (depending on the project type) are required to implement site design measures and/or low-impact development techniques.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is the basic water-quality control law for California. Under this act, the SWRCB has ultimate control over State water rights and water-quality policy. In California, the California Environmental Protection Agency has delegated authority to issue NPDES permits to the SWRCB. The SWRCB, through its nine RWQCBs, carries out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a Water Quality Control Plan, or

Basin Plan, that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's groundwater and surface water, and local water-quality conditions and problems.

The city is in the San Francisco Bay Basin and under the jurisdiction of the San Francisco Bay RWQCB (Region 2), which monitors surface water quality through implementation of the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) and designates beneficial uses for surface water bodies and groundwater in the San Francisco Bay region. The Basin Plan for the San Francisco Basin was last updated on November 5, 2019, and will continue to be updated as deemed necessary to maintain pace with technological, hydrological, political, and physical changes in the region.[2] This Basin Plan describes the water quality that must be maintained to support the designated beneficial uses and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan. The Basin Plan also contains water quality criteria for groundwater.

Statewide Construction General Permit

Construction projects of 1 acre or more are regulated under the SWRCB Construction General Permit (CGP), Order No. 2009-0009-DWQ, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ. Under the terms of the permit, applicants must file Permit Registration Documents (PRDs) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent (NOI), risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System website.

The SWPPP must demonstrate conformance with applicable best management practices, including a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project location. The SWPPP must list best management practices that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for nonvisible pollutants if there is a failure of the best management practices, and a sediment monitoring plan if the site discharges directly to a water body listed on the CWA Section 303(d) list for sediment. Since the future potential development would disturb more than one acre, it would be subject to these requirements. A new CGP was adopted by the SWRCB in September 2022.[3]

SWRCB Trash Amendments

On April 7, 2015, the SWRCB adopted an amendment to the Water Quality Control Plan for Ocean Waters of California to control trash and Part 1, Trash Provisions of the Water Quality Control Plan for Inland

[2] California Regional Water Quality Control Board, November 5, 2019, *San Francisco Basin (Region 2), Water Quality Control Plan (Basin Plan)*, https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html, accessed October 7, 2022.

[3] State Water Resources Control Board, 2022, *NPDES Construction Stormwater General Permit Reissuance*, https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/general_permit_reissuance.html, accessed October 7, 2022.

Surface Waters, Enclosed Bays, and Estuaries of California. Together, they are collectively referred to as "the Trash Amendments." The Trash Amendments apply to all surface waters of California and include a land-use-based compliance approach to focus trash controls on areas with high trash-generation rates. Areas such as high-density residential, industrial, commercial, mixed-urban, and public transportation stations are considered priority land uses. There are two compliance tracks for Phase I and Phase II municipal separate storm sewer systems permittees:

- Track 1: Permittees install, operate, and maintain a network of certified full capture systems in storm drains that capture runoff from priority land uses.
- Track 2: Permittees must implement a plan with a combination of full capture systems, multi-benefit projects, institutional controls, and/or other treatment methods that have the same effectiveness as Track 1 methods.

The Trash Amendments provide a framework for permittees to implement its provisions. Full compliance must occur within 10 years of the permit and permittees must also meet interim milestones, such as average load reductions of 10 percent per year.

Water Conservation in Landscaping Act of 2006

The Water Conservation in Landscaping Act includes the State of California's Model Water Efficient Landscape Ordinance (MWELO), which requires cities and counties to adopt landscape water conservation ordinances. The MWELO was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and build resiliency for future droughts. State law requires all land use agencies, which includes cities and counties, to adopt a Water Efficient Landscape Ordinance that is at least as efficient as the MWELO prepared by the Department of Water Resources.[4] The 2015 revisions to the MWELO improve water conservation in the landscaping sector by promoting efficient landscapes in new developments and retrofitted landscapes. The revisions increase water efficiency by requiring more efficient irrigation systems, incentives for grey water usage, improvements in on-site stormwater capture, and limiting the portion of landscapes that can be covered in high-water-use plants and turf. New development projects that include landscape areas of 500 square feet or more are subject to the MWELO. This applies to residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review. The previous landscape size threshold for new development projects ranged from 2,500 to 5,000 square feet. The size threshold for rehabilitated landscapes has not changed and remains at 2,500 square feet.

Regional Regulations

Alameda County Flood Control and Water Conservation District

The Alameda County Flood Control and Water Conservation District (District) provides flood protection for Alameda County residents and businesses. The District plans, designs, constructs, and maintains flood-

[4] California Department of Water Resources, 2022, Model Water Efficient Landscape Ordinance, https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Model-Water-Efficient-Landscape-Ordinance, accessed October 19, 2022.

control projects such as natural creeks, channels, levees, pump stations, dams, and reservoirs. In 2018, the District updated the *Hydrology & Hydraulics Manual,* which serves as a guide for minimum design requirements and provides a hydrologic model for all of Alameda County.[5]

Alameda County Clean Water Program

The District is also charged with administering the Clean Water Program for the 14 cities of Alameda County, including Oakland, the Alameda County Flood Control District, unincorporated areas of Alameda County, and the Zone 7 Water Agency. The Alameda County Clean Water Program's (ACCWP) C.3 Stormwater Technical Guidance is meant to assist developers, builders, and project sponsors in incorporating site design, source control, and treatment measures in their projects to meet requirements specified in the MRP. The District provides administrative and contracting services for the ACCWP to help comply with federal and state requirements to improve water quality and better manage urban stormwater and runoff.[6]

The C.3 Stormwater Technical Guidance was revised in March 2023. According to the C.3 Guidance, the project is designated as a regulated project since it will create 10,000 square feet or more of impervious surface.

Furthermore, the project site lies within an area mapped by ACCWP as subject to hydromodification requirements due to steep slopes. The project would create one acre or more of impervious surfaces, would increase impervious surfaces over pre-project conditions, and is in a susceptible area according to the ACCWP maps. Hydromodification measures require that the post-project stormwater runoff rates and duration match pre-project discharge rates and durations for 10 percent of the pre-project 2-year peak flow up to the 10-year peak flow.

Water Quality Control Plan for the San Francisco Bay Basin

The Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin establishes water quality standards for surface waters and groundwater of the region and includes an implementation plan describing the actions by the Regional Board and others that are necessary to achieve and maintain the water quality standards. The Regional Board regulates waste discharges to minimize and control their effects on the quality of the region's surface water and groundwater. Permits are issued under various programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes of the water quality problems, if known. For water bodies with water quality below the levels necessary to allow all the beneficial uses of the water, plans for improving water quality are included. The latest update of the Water Quality Control Plan was issued November 5, 2019.[7]

[5] Alameda County, Flood Control & Water Conservation District, 2018, *Alameda County Hydrology & Hydraulics Manual*, https://acfloodcontrol.org/the-work-we-do/the-work-we-do-hydrology-manual/, accessed October 7, 2022.

[6] Alameda County, Flood Control & Water Conservation District, 2022, The Work We Do, https://acfloodcontrol.org/the-work-we-do/the-work-we-do-programs/, accessed October 19, 2022.

[7] San Francisco Bay Regional Water Board, 2022, Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin, https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#basinplan, accessed November 10, 2022.

Updates to the Basin Plan are regularly considered in a process called the Triennial Review. A 2021 Triennial Review process began with a June 21, 2021, public workshop to consider Basin Planning projects and priorities.[8]

Local Regulations

Oakland General Plan

Chapter 3, *Conservation*, of the Oakland General Plan Open Space, Conservation, and Recreation Element addresses the conservation, development, and use of Oakland's natural resources, including water quality. In addition, Chapter 2, *Open Space*, of the Open Space, Conservation, and Recreation Element, as well as the Safety Element, also include policies and guidelines relating to hydrology and water quality. These are outlined in Table 4.9-1, *Oakland General Plan Policies Relevant to Hydrology and Water Quality and the Proposed Project*.

TABLE 4.9-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO HYDROLOGY AND WATER QUALITY AND THE PROPOSED PROJECT

Policy No.	Text
Open Space, Conservation, and Recreation Element	
OS-1.2	Conserve privately-owned areas with important natural resource values through a combination of land acquisition and development controls. Use the following criteria when developing priorities for acquisition or protection: a) steep hillside parcels over 10 acres in size; b) parcels with significant biological resources, including endangered species habitat and native plant communities; c) parcels which can potentially link together or expand existing open space areas; d) visually prominent properties, including ridgelines and other areas with high scenic value; and e) properties where the use of eminent domain is not required.
CO-1.1	Regulate development in a manner which protects soil from degradation and misuse or other activities which significantly reduce its ability to support plant and animal life. Design all construction to ensure that soil is well secured so that unnecessary erosion, siltation of streams, and sedimentation of water bodies does not occur.
CO-2.4	Minimize hillside cuts and fills and the removal of desirable vegetation. Limit large-scale grading to those areas where it is essential to development. Where hillside grading does occur, reshape the terrain in smooth, naturally appearing contours rather than flat, terraced benches. Immediately replant and reseed graded areas to reduce soil loss.
CO-5.1	Encourage groundwater recharge by protecting large open space areas, maintaining setbacks along creeks and other recharge features, limiting impervious surfaces where appropriate, and retaining natural drainage patterns within newly developing areas.
CO-5.3	Employ a broad range of strategies, compatible with the Alameda Countywide Ocean Water Program, to: a) reduce water pollution associated with stormwater runoff; b) reduce water pollution associated with hazardous spills, runoff from hazardous material areas, improper disposal of household hazardous wastes, illicit dumping, and marina "live-aboards;" c) improve water quality in Lake Merritt to enhance the lake's aesthetic, recreational, and ecological functions.

[8] San Francisco Bay Regional Water Board, 2022, Triennial Review. *Basin Planning*. https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#triennialreview, accessed November 10, 2022.

TABLE 4.9-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO HYDROLOGY AND WATER QUALITY AND THE PROPOSED PROJECT

Policy No.	Text
CO-6.1	Protect Oakland's remaining natural creek segments by retaining creek vegetation, maintaining creek setbacks, and controlling bank erosion. Design future flood control projects to preserve the natural character of creeks and incorporate provisions for public access, including trails, where feasible. Strongly discourage projects which bury creeks or divert them into concrete channels.
Safety Element	
GE-2	Continue to enforce ordinances and implement programs that seek specifically to reduce the landslide and erosion hazards.

Source: City of Oakland, *City of Oakland General Plan*, *Open Space, Conservation, and Recreation Element* (June 1996); *Safety Element* (November 2004).

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to hydrology and water quality in Oakland. OMC Chapter 13.16, *Creek Protection, Stormwater Management and Discharge Control*, prohibits activities that would result in the discharge of pollutants to Oakland's waterways or cause damage to creeks, creek functions, or habitat. The ordinance requires the use of standard best management practices to prevent pollution or erosion to creeks and/or storm drains. Additionally, a creek protection permit is required for any construction work on creekside properties. The ordinance also establishes comprehensive guidelines for the regulation of discharges to the City's storm drain system and the protection of surface water quality. The ordinance identifies best management practices and other protective measures for development projects. Under the ordinance, the City of Oakland Public Works Agency issues permits for storm drainage facilities that would be connected to existing city drainage facilities. In 1997, the ordinance was amended to include the requirement for a creek protection permit for any construction or related activity on Creekside property in OMC Section 13.16.200, *Criteria for Permit Approval*. The ordinance includes enforcement provisions to provide more effective methods to deter and reduce the discharge of pollutants to the storm drain system, local creeks, and San Francisco Bay. Specifically, OMC Section 13.16.200 identifies that the following criteria for creek protection permit shall be met for permit approval:

A. The proposed activity (during construction and after project is complete) will not (directly or indirectly) adversely affect the creek. In determining whether the creek would be adversely impacted, the Chief of Building Services shall, at a minimum, consider the following factors:

    1. Whether the proposed activity may discharge pollutants into the creek;
    2. Whether the proposed activity may result in modifications to the natural flow of water in the creek;
    3. Whether the proposed activity may deposit new material into the creek or cause bank erosion or instability;
    4. Whether the proposed activity may result in alteration of the capacity of the creek; and
    5. Such other factors as the Chief of Building Services deems appropriate.

B. The proposed activity will not adversely affect the riparian corridor, including riparian vegetation, animal wildlife or result in loss of wildlife habitat;

C. The proposed activity will not degrade the visual quality and natural appearance of the riparian corridor;

D. The proposed activity is consistent with the intent and purposes of this chapter;

E. The proposed activity will not endanger public or private property; and

F. The proposed activity will not (directly or indirectly) threaten the public's health or safety.

OMC Section 15.04.3.2.065, *CBC Chapter 18B added*, requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as amount of proposed excavation and degree of site slope. During project construction, the volume of the excavated fill material could exceed 50 cubic yards and could result in a 20 percent slope on-site, or the depth of excavation could exceed five feet at any location. Therefore, the project applicant would be required to apply for the grading permit and prepare a grading plan, erosion and sedimentation control plan, and drainage plan.

Chapter 15.74, *Transportation and Capital Improvement Impact Fees*, requires residential projects to pay a fee per housing unit to assure that development projects pay their fair share to compensate for the increased demand for transportation and capital improvements infrastructure generated by such development projects. Section 15.74.110, *Capital Improvements Impact Fee Fund*, establishes funds that are to be used to pay for projects that are required for fire, police, library, parks and recreation, or storm drain services. As outlined in Section 15.74.050, *Amount of impact fees*, the impact fee for residential projects is calculated by multiplying the fee per housing unit but the number of additional housing units to be constructed. For residential projects, the impact fee amount shall be based on the impact fee zone in which the development project is located as contained within the Master Fee Schedule and as set forth in the maps included in Section 15.74.150, *Impact fees zone maps*, of this chapter. Payment of the impact fees shall be due in one installment prior to the issuance of a building permit for all or any portion of the development project associated with the building permit, and shall be in the amount of 100 percent of the impact fee.

Chapter 18.01, *Water-Efficient Landscaping Ordinance*, of the OMC enacts the provisions of the MWELO. Oakland's Water Efficient Landscaping Ordinance applies to any single-family or multifamily residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review and that are either new construction projects with total landscape area equal to or greater than 500 square feet in size or rehabilitated landscape projects with total landscape area of 2,500 square feet or larger. The City additionally requires project applicants for civic, multifamily, and commercial landscape projects to meet the three Bay Friendly Basics practices, including diverting construction and demolition debris, excavated soil spoils and land-clearing debris in compliance with OMC Chapter 15.34, *Construction and Demolition Waste Reduction and Recycling Ordinance,* choosing and locating plants to grow to their natural size, and avoiding invasive plant species listed by California Invasive Plant Council's Don't Plant A Pest brochure.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental

effects. The following conditions are specific SCAs that are applicable to the proposed project and apply to hydrology and water quality:

- SCA-39. Seismic Hazards Zone (Landslide/Liquefaction): The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.
- SCA-43. Hazardous Materials Related to Construction: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:
  a) Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;
  b) Avoid overtopping construction equipment fuel gas tanks;
  c) During routine maintenance of construction equipment, properly contain and remove grease and oils;
  d) Properly dispose of discarded containers of fuels and other chemicals;
  e) Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and
  f) If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.
- SCA-50. State Construction General Permit: The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.
- SCA-54. NPDES C.3 Stormwater Requirements for Regulated Projects:
  a) The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and

shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following:

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

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

i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and
ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary.

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

- SCA-57. Vegetation Management on Creekside Properties: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project:

a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat;
b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact;
c) Leave stumps and roots from cut down trees to prevent erosion;
d) Plant fire-appropriate, drought-tolerant, preferably native vegetation;
e) Provide erosion and sediment control protection if cutting vegetation on a steep slope;
f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management;
g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh [diameter at breast height] or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine);
h) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat;

i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development;
j) Do not trim/prune branches that are larger than 4 inches in diameter;
k) Do not remove tree canopy;
l) Do not dump cut vegetation in the creek;
m) Do not cut tall shrubbery to less than 3 feet high; and
n) Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high.

- SCA-58. Creek Protection Plan:
  a) Creek Protection Plan Required: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d).
  b) Construction Best Management Practices: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control best management practices to protect the creek during construction. The measures shall include, but are not limited to, the following:
     i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.
     ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.
     iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.
     iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted.
     v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.
     vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.

vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.
viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.
ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.
x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.
xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains.
xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB).
xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City.

c) Post-Construction Best Management Practices: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion.
d) Creek Landscaping: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival.
e) Creek Protection Plan Implementation: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If

measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.

- SCA-73. Capital Improvements Impact Fee: 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).
- SCA-88. Storm Drain System: 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.

4.9.1.2 EXISTING CONDITIONS

Drainage Area

The project site is in the Lion Creek Watershed, which includes Lion Creek, Horseshoe Creek, and Chimes Creek. The 3.5-square-mile Lion Creek Watershed lies in the city of Oakland. The watershed begins on the west side of the Oakland hills and runs west to San Francisco Bay, narrowing as it passes through flatter land. The eastern boundary of the watershed roughly follows Skyline Boulevard where it borders the San Leandro Creek Watershed. The former Leona tributary, now part of Lion Creek, drains an abandoned sulfur mine. Horseshoe and Chimes Creeks both discharge into Lion Creek, which empties into Lake Aliso on the Mills College campus. From there, the creek enters a series of engineered channels and underground culverts that continue to San Leandro Bay within the larger San Francisco Bay.[9]

Local Drainage

The project site is in a mostly low-density residential area in the Oakland hills, north of Interstate 580 and east of State Highway 13. The site is currently undeveloped and is characterized by steep (20 to 30 percent) upland terrain, which is heavily vegetated by grasses, common brush, native blackberry, and some poison oak. One first-order channel parallels the southern boundary of the proposed development area and is considered a small ephemeral creek.[10] It consists of a vegetated earthen channel in the form of a swale and banks that blend into the flanking hillslopes. Flow in the creek is seasonal and typically only occurs after a rain event. The creek is aligned in a southwest direction and connects to a short, steep concrete chute and sump at the inlet to an 18-inch-diameter reinforced culvert pipe behind and upslope of the residential property at 6212 Viewcrest Drive. The culvert conveys flow between downslope residences to the storm drain under Viewcrest Drive, which eventually discharges into Chimes Creek, Lions Creek, Damon Slough, and then into San Leandro Bay.

[9] Alameda County Flood Control and Water Conservation District, 2022, Lion Creek Watershed, https://acfloodcontrol.org/the-work-we-do/resources/lion-creek-watershed/, accessed October 9, 2022.

[10] Clearwater Hydrology, 2021. *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development,* March 27. See Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft EIR.

Soils on and directly surrounding the site are classified as Hydrologic Soil Group D, which exhibit slow infiltration rates and low hydraulic conductivity, creating conditions for high runoff. Runoff rates would be higher if not for the heavy vegetation that impedes flow.[11]

Storm drainage on the site currently consists of a storm drain just south of Campus Drive. This storm drain connects to a concrete swale and pipe that conveys runoff to a catch basin connected to the storm drain in Chamberlain Court. The storm drain in Chamberlain Court currently accepts stormwater drainage from existing residential properties on Rockingham Court, which are upslope and east of the project site.[12] There is also an existing storm drain in the undeveloped area east of the proposed development area that bisects the project site and discharges into the storm drain in Chamberlain Court. This will continue to be in use after project development; however, no stormwater from the project site will be discharged to this storm drain.

Groundwater

While most of the city of Oakland is within the Santa Clara Valley – East Bay Plain groundwater basin, the area of Oakland east of State Highway 13, including the project site, is not within a designated groundwater basin.[13] The East Bay Municipal Utility District (EBMUD) provides water to the City of Oakland and the area that includes the project site. All of the water provided by EBMUD is obtained from surface water sources. The primary source is the Mokelumne River and the secondary source is local runoff from the East Bay watersheds, which is stored in reservoirs within EMBUD's service area.[14] Currently, EMBUD does not use groundwater as a water supply source.

It is unlikely that groundwater would be encountered during construction activities and therefore, construction dewatering would not be required. The Leona Heights Sulfur Mine, about 0.5 miles northwest of the project site, reported groundwater levels at depths of 25 to 64.5 feet below ground surface.[15] Since the mining site is at a lower elevation than the project site, the probability that groundwater would be encountered during construction is negligible.

[11] Clearwater Hydrology, 2021. *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development*, March 27. See Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft EIR.

[12] Clearwater Hydrology, 2021, *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development,* March 27. See Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft EIR.

[13] California Department of Water Resources, 2018, SGMA Viewer, https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels, accessed October 7, 2022.

[14] East Bay Municipal Utility District, June 2021, *Urban Water Management Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 19, 2022.

[15] State Water Resources Control Board, 2022, *Leona Heights Sulfur Mine, Oakland, CA, Remedial Design Plan and Creek Restoration Design Report*, https://documents.geotracker.waterboards.ca.gov/regulators/deliverable_documents/5065281510/Leona%20Remedial%20Design%20Plan_Final.pdf, accessed October 21, 2022.

Surface Water Quality

Damon Slough, San Leandro Bay, and the central San Francisco Bay are listed on the CWA Section 303(d) List of Water Quality Limited Segments for pollutants identified in Table 4.9-2, *Pollutants on CWA Section 303(d) List of Water Quality Limited Segments for Receiving Waters From the Proposed Project*.

TABLE 4.9-2 POLLUTANTS ON CWA SECTION 303(D) LIST OF WATER QUALITY LIMITED SEGMENTS FOR RECEIVING WATERS FROM THE PROPOSED PROJECT

Water Body	Pollutant
Damon Slough	Trash
San Leandro Bay	Chlordane
	DDT
	Dieldrin
	Dioxin Compounds
	Furan Compounds
	Invasive Species
	Lead
	Mercury
	Polycyclic Aromatic Hydrocarbons
	Pesticides
	Zinc
Central San Francisco Bay	Chlordane
	DDT
	Dieldrin
	Dioxin Compounds
	Furan Compounds
	Invasive Species
	Mercury
	PCBs
	PCBs (dioxine like)
	Selenium
	Trash

Source: State Water Resources Control Board, January 2022, *California 2020-2022 Integrated Report (303(d) List/305(b) Report)*, Appendix A, *Proposed Final 2020-2022 303(d) List*, https://www.waterboards.ca.gov/water_issues/programs/tmdl/2020_2022state_ir_reports_revised_final/apx-a-303d-list.xlsx, accessed October 7, 2022.

Flood Zones

The Federal Emergency Management Agency (FEMA) designates floodplain zones to assist cities in mitigating flooding hazards through land use planning and also outlines specific regulations for

construction within a 100-year floodplain. According to FEMA Flood Insurance Rate Map No. 06001C0095G dated August 3, 2009, the site is not in a 100-year flood zone.[16]

Also, the Department of Water Resources' dam inundation maps and the City of Oakland's Local Hazard Mitigation Plan show that the project site is not within a dam inundation zone.[17, 18]

Seiche, Tsunami, and Mudflow

Tsunami

A tsunami is a large wave generated by an earthquake, landslide, or volcanic eruption. Tsunami inundation maps have been developed by the California Department of Conservation.[19] According to the tsunami inundation map, the project site is not within the mapped tsunami inundation area. Therefore, it would not be subject to flooding from a tsunami.

Seiches

Seiches are waves that oscillate in enclosed water bodies, such as reservoirs, lakes, ponds, swimming pools, or semienclosed bodies of water, such as San Francisco Bay. There have been no recorded seiches in the Bay Area.[20] Outside of the Bay Area, earthquake-induced seiches have on occasion damaged dams and water storage tanks. The project site is not near any reservoir or water storage tank. The project site is also not within a tsunami inundation zone or dam inundation area. Therefore, it can be assumed that the project site would not be impacted by a seiche.

Mudflow

A mudflow is a landslide composed of saturated rock debris and soil with a consistency of wet cement. Most sloping land has some landslide potential. The risks tend to be greatest where a number of contributing factors are present, including slopes over 15 percent; weak, unconsolidated or shallow soils; water saturation; a history of landslides; active earthquake faults; and extensive grading and vegetation removal (from fires or development activity).

[16] Federal Emergency Management Agency, FEMA's National Flood Hazard Layer (NFHL) Viewer, https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd, accessed October 19, 2022.

[17] California Department of Water Resources, modified October 2015, Dam Breach Inundation Map Web Publisher, https://fmds.water.ca.gov/maps/damim/, accessed October 7, 2022.

[18] City of Oakland, July 2021, *2021-2026 Hazard Mitigation Plan*, https://cao-94612.s3.amazonaws.com/documents/2021-07-01_OaklandHMP_AdoptedFinal-1.pdf, accessed October 19, 2022.

[19] California Department of Conservation, updated August 2019, Tsunami Inundation Zones, https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=4d56b41ba6c64d538ec3a91d40078dff, accessed October 7, 2022.

[20] City of Oakland, July 2021, *2021-2026 Hazard Mitigation Plan*, https://cao-94612.s3.amazonaws.com/documents/2021-07-01_OaklandHMP_AdoptedFinal-1.pdf, accessed October 19, 2022.

The project site is undeveloped and is characterized by heavily vegetated upland terrain with slopes ranging between 20 and 30 percent. There is a potential landslide hazard on the site.[21] With the steep slopes on site and the potential for landslides, the risk of mudflows on the site is possible. However, damage to hillside structures is minimized by the implementation of grading measures and drainage plans that will be required for new construction on hillside properties. A more detailed discussion of this issue is provided in Chapter 4.6, *Geology and Soils*, of this Draft EIR.

4.9.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant hydrology and water quality impact if it would:

1. Violate any water quality standards or waste discharge requirements.
2. 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 a level which would not support existing land uses or proposed uses for which permits have been granted).
3. Result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters.
4. Result in substantial flooding on- or off-site.
5. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems and require or result in construction of new stormwater drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects.
6. Create or contribute substantial runoff which would be an additional source of polluted runoff.
7. Otherwise substantially degrade water quality.
8. 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.
9. Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
10. Expose people or structures to a substantial risk of loss, injury, or death involving flooding.
11. Expose people or structures to a substantial risk of loss, injury, or death as a result of inundation by seiche, tsunami, or mudflow.
12. 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 offsite.

[21] Metropolitan Transportation Commission and Association of Bay Area Governments, August 2021, MTC/ABAG Hazard Viewer Map, https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8, accessed October 7, 2022.

13. Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources. *[Note: Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of water quality through (a) discharging a substantial amount of pollutants into a creek, (b) significantly modifying the natural flow of the water or capacity, (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability, or (d) substantially endangering public or private property or threatening public health or safety]*
14. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to hydrology and water quality.

4.9.3 IMPACT DISCUSSION

HYD-1 The proposed project would not violate any water quality standards or waste discharge requirements.

Urban runoff can carry a variety of pollutants, such as oil and grease, metals, sediment and pesticide residues from roadways, parking lots, rooftops, and landscaped areas. Runoff could deposit these pollutants into adjacent waterways via the storm drain system. The proposed project includes the development of ten single-family detached homes. Stormwater runoff from such future development could affect water quality. Since the project site is currently undeveloped, the proposed project would increase the total area of impervious surfaces and result in greater potential to introduce pollutants to receiving waters. Furthermore, construction activities could also result in the degradation of water quality, releasing sediment, oil and greases, and other chemicals to nearby water bodies.

Construction

Clearing, grading, excavation, and construction activities associated with future development have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. The refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

Because the proposed project would disturb one or more acres of land, it would be required to comply with the NPDES CGP, as identified in SCA-50, *State Construction General Permit*. CGP requirements include the preparation of a SWPPP that requires the incorporation of best management practices to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The CGP also requires that, prior to the start of construction activities, the project applicant must file PRDs with the SWRCB, which includes an NOI, risk assessment, site map, annual fee, and signed certification statement. The SWPPP also includes a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations and as required sampling of site effluent and receiving waters. A Qualified SWPPP Practitioner shall be responsible for implementing the best management practices at the site and performing all required monitoring and inspection,

maintenance, and repair activities. Prior to issuance of a grading permit, a copy of the project's NOI and SWPPP would be submitted to the City for approval. Further, a copy of the NOI and the SWPPP must be kept on-site and made available for review by City inspectors upon request.

Figure 4.9-1, *Erosion Control Plan*, shows erosion-control measures that would be employed during construction and include storm drain inlet and catch basin filters, erosion-control blankets, silt fences, and fiber rolls.

Furthermore, all grading and clearing activities must comply with OMC Chapter 15.04.3.2.065, to minimize potential impacts to water quality. Applicants are required to apply for a grading permit and prepare a grading plan, erosion and sedimentation control plan, and drainage plan. The proposed project would also be required to comply with applicable Oakland General Plan policies to prevent impacts to water quality from construction activities, including Policy GE-2, which requires grading permits and plans to control erosion and sedimentation. SCA-43, *Hazardous Materials Related to Construction*, and SCA-57, *Vegetation Management on Creekside Properties,* would also apply to construction activities. These SCAs require the implementation of best management practices by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health from hazardous materials and prevent erosion and siltation impacts to nearby waterways. Mitigation Measure HYD-1 includes the project-specific erosion and sediment-control measures that are provided in the Creek Protection Plan prepared for the proposed project,[22] pursuant to SCA-57, *Vegetation Management on Creekside Properties,* and SCA-58, *Creek Protection Plan*.

Impact HYD-1: Uncontrolled erosion and sedimentation could have negative effects on water quality.

Mitigation Measure HYD-1: To protect water quality and minimize impacts to the ephemeral creek south of the proposed development area, the project contractor shall implement the following:

- Prior to the start of construction, the project manager shall hold a training session for the construction crew explaining the prohibition on the discharging of construction debris, materials, and trash to the creek channel, including its banks. Each day prior to leaving the site, the project manager/foreman shall walk the site perimeter to check for discarded debris and trash, removing whatever is found to a secure location for disposal.
- Viewcrest Drive shall be swept clean after each day of construction to remove sediment discharged or tracked to the roadway by equipment and crew traffic to and from the work area. The collected sediment, trash, and other debris shall be contained in covered trash barrels or debris boxes, secured against overturning, and protected from urban wildlife (e.g., raccoons, deer). The contents of these barrels shall be off hauled to a legitimate waste depository at whatever frequency is required to maintain a clean work area.
- Immediately prior to construction, the contractor shall install silt fencing outside and downslope of the structure between the structure and the slope break to the immediate channel area. The

[22] Clearwater Hydrology, 2021. *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development,* March 27. See Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft EIR.

fencing shall be installed pursuant to the manufacturer's guidelines. It shall remain in place until the residential construction is completed, then disposed of properly or repurposed off-site.

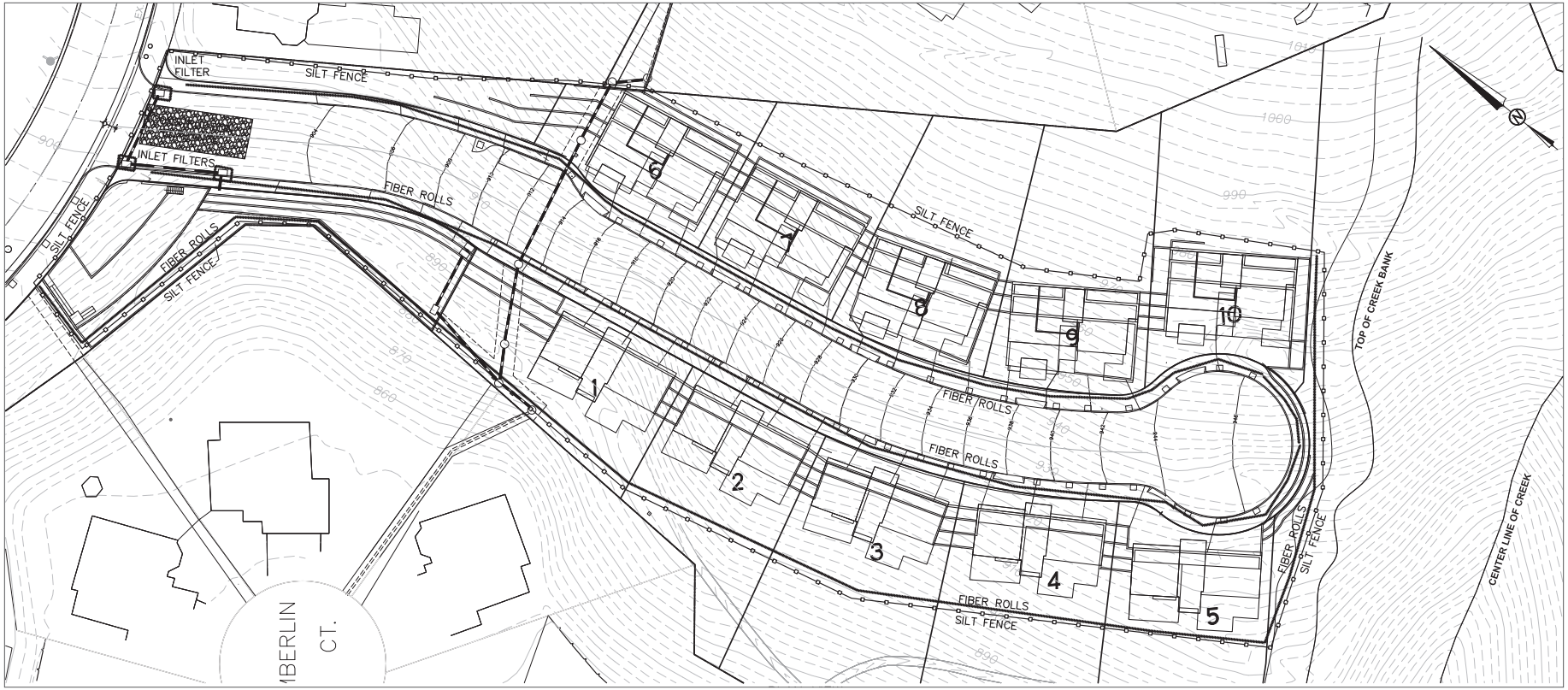
- During the construction, care shall be taken to keep construction tools, stored materials or debris within the area bounded by the erosion control, i.e., upslope of the silt fencing or on the side patio or driveway. No construction debris should be allowed into the channel, and any accidental discharge of such debris onto the creek bank or the channel bed shall be retrieved immediately.
- Accidental spills of chemical agents of any sort, including oils, greases, paint, or other materials used in construction shall be immediately segregated from the tributary channel and disposed of at an appropriately classified landfill for that material. Any soil contaminated by the spill shall also be removed and disposed of in the same manner. If any hazardous material is discharged into the tributary channel, the contractor shall immediately inform the City of Oakland's Watershed and Stormwater Management Division, OAK311 (report active infrastructure emergencies by dialing 311 or (510) 615-5566), or the City of Oakland's Department of Public Works.
- Heavy equipment operators shall maintain hazardous material cleanup kits on-site to rapidly respond to a potential hazardous material spill, leak, or other discharge.
- Following completion of construction, the upper bank and slope areas graded or otherwise disturbed during construction shall be seeded with native grasses. Other riparian plantings native to the East Bay hills could be added as desired. The graded/disturbed areas between any such supplemental plantings should be overlain with a light-duty mulch to stabilize the soil surface against raindrop impact and erosion. Pacific Coast Seed's Landmark "Habitat'' Mix, or a demonstrated native equivalent, which should be applied at a rate of 40 pounds per acre, shall be used. The Landmark Habitat Mix includes the following:
  - *Bromus carinatus*/Native California brome
  - *Elymus glaucus*/Blue wildrye
  - *Hordeum califomicum*/California barley
  - *Festuca idahoensis*/ldaho fescue
  - *Nassella pulchra*/Purple needlegrass
  - *Poa secunda*/Native pine bluegrass

  The base seed mix shall be 10 percent augmented with herbaceous perennials: yarrow (*Achillea millefolium*), bee plant (*Scrophularia californica*), and California aster (*Symphotrichum chilense*).

Significance with Mitigation: Less than significant.

Operation

The proposed project would result in 60,800 square feet of new impervious surface and 76,800 square feet of landscaped and pervious surfaces. Runoff from streets and residential developments typically contain oils, grease, fuel, antifreeze, by-products of combustion (such as lead, cadmium, nickel, and other metals) as well as fertilizers, herbicides, pesticides, and other pollutants. Precipitation at the beginning of the rainy season may result in an initial stormwater runoff (first flush) with high pollutant concentrations.



Source: Moran Engineering, 2021.

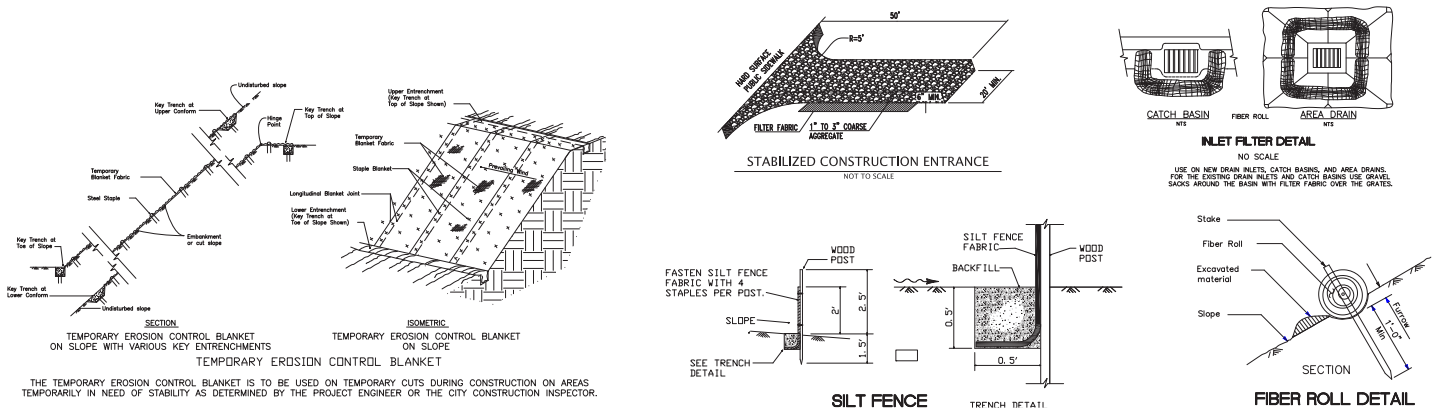


Figure 4.9-1
Erosion Control Plan

Water quality in stormwater runoff is regulated by the MRP, which gives its permittees (ACCWP) planning authority to implement the C.3 provisions of the permit. Because the proposed project would create and/or replace more than 10,000 square feet of impervious surface, it would be classified as a Regulated Project and would be subject to the C.3 provisions of the NPDES permit. These requirements are also included in SCA-54, *NPDES C.3 Stormwater Requirements for Regulated Projects*, and pertain to site design, source control, and stormwater treatment measures that must be implemented. Each project regulated under the C.3 provisions must treat the specified amount of runoff identified in provision C.3.d of the NPDES permit with on-site low-impact development treatment measures, which include harvesting and use, evapotranspiration, infiltration, and biotreatment. Additionally, SCA-57 is applicable for preventing potential erosion and siltation impacts after construction of the proposed project.

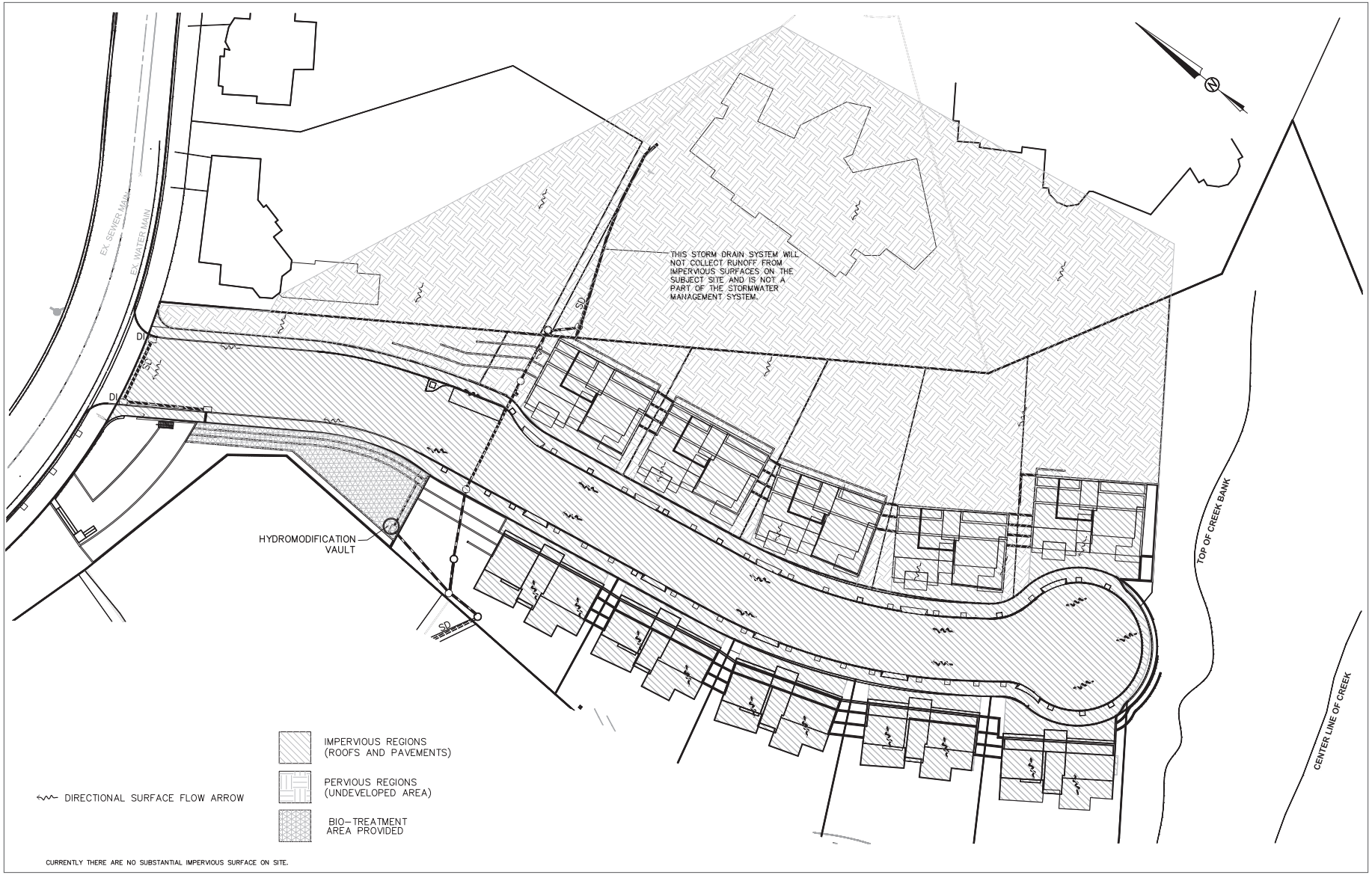
The preliminary design of stormwater features is shown in Figure 4.9-2, *Stormwater Management Plan*. Stormwater runoff from roofs and other impervious areas on the site would be routed to the proposed private street, Viewcrest Lane. All street frontage runoff would be conveyed northwesterly via a curb gutter to a drain inlet near the Campus Drive entry. From the inlet, a storm drainpipe would convey the runoff to a 2,850-square-foot bioretention planter that would function as both a water treatment area and a bioretention pond. The bioretention planter provides a treatment area that exceeds the 2,739-square-foot area required by the C.3 provisions of the MRP and the ACCWP C.3 Stormwater Technical Guidance Manual.

Treated runoff would be conveyed to the hydromodification vault on the west side of the project site. The treated runoff would then be conveyed to the existing storm drain in Chamberlain Court. The existing storm drain running through the site would not collect any runoff from the proposed impervious areas and is not part of the on-site stormwater drainage system.

Since the project site is in an area susceptible to hydromodification, the proposed project would include an underground hydromodification vault, adjacent to the bioretention planter, that would meet the MRP requirements for hydromodification measures and ensure that post-project discharge rates and durations for the specified design storms in the MRP would not exceed pre-project discharge rates and durations. Details regarding the design of the hydromodification vault and hydrologic/hydraulic calculations would be provided in the required Stormwater Management Plan.

The project applicant would be required to prepare and submit a Stormwater Supplemental Form to the City for review and approval prior to the start of construction. The Stormwater Supplemental Form would detail the site design, source control, and stormwater treatment measures; rainwater harvesting feasibility; and hydromodification measures. Hydromodification management measures shall be designed so that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10 percent of the pre-project 2-year peak flow up to the pre-project 10-year peak flow. The Stormwater Supplemental Form must be submitted with a Preliminary Post-construction Stormwater Management Plan (a project drawing) containing the following information:[23]

[23] City of Oakland, April 8, 2016, City of Oakland Stormwater Supplemental Form, https://cao-94612.s3.amazonaws.com/documents/oak038805.pdf, accessed October 19, 2022.



Source: Moran Engineering, 2021.

POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE

STORMWATER RUNOFF FROM ROOFS TO BE ROUTED TO THE PRIVATE STREET FRONTAGE. ALL STREET FRONTAGE RUNOFF TO BE CONVEYED NORTHWESTERLY VIA CURB GUTTER TO A DRAIN INLET NEAR THE CAMPUS DRIVE ENTRY. FROM THE INLET A STORM DRAIN PIPE CONVEYS THE RUNOFF TO A BIORETENTION PLANTER AS SHOWN IN PLAN VIEW. THE TREATED RUNOFF IS CONVEYED VIA AN EXISTING CONCRETE SWALE AND PIPE TO THE CATCH BASIN ON THE SOUTH SIDE OF CAMPUS WEST OF THE SITE.

0 100
Scale (Feet)

Figure 4.9-2
Stormwater Management Plan

- Location and size of new impervious surface
- Directional surface flow of stormwater runoff
- Location of proposed on-site storm drain lines
- Preliminary type and location of proposed site design measures
- Preliminary type and location of proposed source-control measures
- Preliminary type and location of proposed stormwater treatment measures
- Preliminary type and location of proposed hydromodification management measures

The project applicant would also be required to sign an agreement of responsibility and funding for ongoing operation and maintenance of stormwater treatment measures. Required compliance with the C.3 provisions of the MRP and Oakland SCAs as well as implementation of site design, source control, and treatment control measures would reduce operational impacts to water quality to *less than significant*. In summary, there would be no significant impacts to water quality associated with operation of the proposed project.

Significance without Mitigation: Less than significant.

HYD-2	**The proposed project would not 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.**

The proposed project would connect to the EBMUD water system and there would be no withdrawal of groundwater at the site. Furthermore, EBMUD does not use groundwater as a water supply source.

The proposed project would increase the impervious surface coverage at the project site, which could deplete groundwater recharge. However, as mentioned in Section 4.9.1.2, *Existing Conditions*, the project site is not within a designated groundwater basin and is not part of a groundwater sustainability plan. In addition, 56 percent of the proposed development area of the project site will consist of pervious surfaces, and the remainder of the project site (17.5 acres) will be held in perpetuity as pervious open space, both of which will provide continued groundwater recharge. Therefore, the proposed project would not deplete groundwater supplies, interfere substantially with groundwater recharge, or conflict with or obstruct implementation of a sustainable groundwater management plan, and this impact would be *less than significant*.

Significance without Mitigation: Less than significant.

HYD-3	**The proposed project would not result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters.**

Construction

Project construction would require grading and soil exposure, which has the potential to cause the transport of silt and sediment into local waterways, if not controlled. To minimize this impact, the

proposed project would be required to comply with all of the requirements of the State CGP, Oakland General Plan policies, Oakland SCAs, and the City's grading requirements. The proposed project includes installation of typical construction best management practices, such as silt fences, fiber rolls, catch basin inlet protection, and stabilization of truck entrance/exits. Details of the construction best management practices and implementation and inspection schedule will be provided in the SWPPP and Erosion and Sedimentation Control Plan. Also, erosion and sediment-control measures are provided in the Creek Protection Plan prepared for the proposed project and listed in Mitigation Measure HYD-1,[24] pursuant to SCA-57, *Vegetation Management on Creekside Properties,* and SCA-58, *Creek Protection Plan*. Compliance with the established permits and regulations and Mitigation Measure HYD-1 would ensure that construction impacts from erosion and siltation would *be less than significant*.

Operation

The proposed project would increase impervious surfaces on the site, which in turn could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause erosion or siltation in receiving water bodies. However, the proposed project would be required to comply with the C.3 provisions of the MRP (SCA-54), which include site design, source control, and treatment control measures that address stormwater runoff and would reduce the potential for erosion and siltation. These best management practices are described in further detail under Impact Discussion HYD-1.

In addition, the project site is in a hydromodification zone and meets the criteria to implement on-site hydromodification measures (i.e., it creates one or more acres of impervious surfaces). This requires on-site stormwater retention for specified storm events to ensure that post-project flow rates and durations do not exceed pre-project conditions. The proposed project would incorporate an underground hydromodification vault adjacent to the bioretention planter to meet these requirements. The reduction in stormwater runoff from the site would also reduce the potential for erosion and siltation impacts.

With the preparation of a SWPPP, Erosion and Sedimentation Control Plan, and Creek Protection Plan and implementation of the CGP, Oakland SCAs, the City's grading requirements, and stormwater control and hydromodification measures, operational impacts of the proposed project regarding erosion and siltation would be *less than significant*. In summary, there would be no significant impacts to erosion or siltation associated with construction and operation of the proposed project.

Significance without Mitigation: Less than significant.

[24] Clearwater Hydrology, 2021. *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development.* March 27. See Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft EIR.

HYD-4 The proposed project would not result in substantial flooding on- or off-site.

The proposed project would result in an increase in the amount of impervious surfaces on the site, which in turn could result in an increase in stormwater runoff, higher peak discharge rates, and the potential to cause flooding in areas without adequate drainage facilities.

However, the proposed project would be required to comply with the C.3 provisions of the MRP (SCA-54) and the ACCWP C.3 Stormwater Technical Guidance Manual. As a regulated project, low-impact development and site design best management practices must be implemented to detain stormwater on-site, decrease surface water flows, and slow runoff rates. The proposed project would also be subject to hydromodification requirements that ensure that post-project runoff rates do not exceed pre-project runoff rates for selected storm events. In addition, the proposed project must comply with SCA-88, *Storm Drain Systems*, which requires storm drainage systems to be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. Peak stormwater runoff from the project site is required to be reduced by at least 25 percent compared to the pre-project condition, to the maximum extent practicable.

Furthermore, the site is not in a 100-year floodplain, a dam inundation area, or near any surface water bodies that could result in seiches. Therefore, the proposed project would not result in substantial flooding on- or off-site or result in the impedance or redirection of flood flows. With the implementation of the requirements of the C.3 provisions of the MRP and compliance with Oakland SCAs, impacts related to on-site or off-site flooding would be *less than significant*.

Significance without Mitigation: Less than significant.

HYD-5 The proposed project would not create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems and would not require or result in construction of new stormwater drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects.

Urban development has two potential impacts associated with stormwater runoff hydrology. Impervious surfaces, such as roads, sidewalks, and buildings, prevent the natural infiltration of stormwater into the soil and thus create higher runoff volumes. In addition, more rapid transport of runoff over impervious surfaces combined with higher runoff volumes can cause elevated peak flows. These increases in flows may adversely impact the capacity of the storm drain systems to carry the excess stormwater flows. As shown on Figure 4.9-2, all stormwater runoff from roofs and other impervious areas on the site would be routed to the proposed private street, and all street frontage runoff would be conveyed northwesterly via a curb gutter to a drain inlet near the Campus Drive entry. Runoff would be conveyed to the on-site bioretention planter and underground hydromodification vault and then to the catch basin west of the site that is connected to the storm drain in Chamberlain Court. The underground hydromodification vault regulates peak runoff flows so that post-project runoff rates and volumes do not exceed pre-project runoff rates and volumes for specified design storms.

The proposed project would be required to comply with the requirements of the C.3 provisions of the MRP (SCA-54). In addition, SCA-88 requires the proposed project's storm drain to be designed in accordance with the City's Storm Drainage Design Guidelines, which states that runoff from the project site shall be reduced by at least 25 percent compared to pre-project conditions. The Creek Protection Plan and Post-Construction Stormwater Management Plan are subject to City review to verify that the on-site storm drain facilities and treatment systems can accommodate stormwater runoff from the site and would not exceed the capacity of downstream drainage systems at the point of connection. Also, the project applicant would be required to pay capital improvements impact fees, pursuant to SCA-73, *Capital Improvements Impact Fee*, and OMC Section 15.74.110 which would compensate for any required improvements to infrastructure generated by development projects.

With the implementation of the requirements of the C.3 provisions of the MRP, compliance with the OMC and Oakland SCAs, and preparation/submittal of the Post-Construction Stormwater Management Plan, impacts related to storm drain capacity would be *less than significant*, and the proposed project would not require or result in construction of new stormwater drainage facilities or expansion of existing facilities.

Significance without Mitigation: Less than significant.

HYD-6 The proposed project would not create or contribute substantial runoff which would be an additional source of polluted runoff.

Pollutants commonly associated with construction sites that can impact stormwater are sediments, nutrients, trace metals, oil, grease, fuels, and miscellaneous construction wastes. Pollutants generated from the operational phase of the proposed project may include sediment, nutrients, organic compounds, trash and debris, oxygen-demanding substances, bacteria and viruses, oil and grease, and pesticides/herbicides.

As required by the City and the MRP, best management practices must be implemented during both the construction and operational phases (SCA-58). These best management practices would control and prevent the release of sediment, debris, and other pollutants into the storm drain system. Implementation of best management practices during construction would be in accordance with the provisions of the SWPPP, which would minimize the release of sediment, soil, and other pollutants, and the proposed project would be required to submit a grading plan, erosion and sedimentation control plan, and drainage plan to the City for approval prior to the start of construction. Operational best management practices will be required to meet the C.3 provisions of the MRP (SCA-54). These requirements include the incorporation of site design, source control, and treatment control measures to treat and control runoff before it enters the storm drain system. This includes bioretention and biotreatment features that will reduce the volume and improve the quality of stormwater runoff. With implementation of best management practices in accordance with MRP requirements, the OMC, and Oakland SCAs, the potential impact on water quality would be *less than significant*.

Significance without Mitigation: Less than significant.

HYD-7 The proposed project would not otherwise substantially degrade water quality.

Please see Impact Discussions HYD-1, HYD-3, and HYD-6. With implementation of the best management practices specified in the MRP and SWPPP, Oakland General Plan policies, Oakland SCAs, the City's grading requirements and Mitigation Measure HYD-1, construction-related impacts to water quality would be less than significant. Furthermore, submittal and implementation of the Stormwater Management Plan, which includes site design, source control, and treatment control measures, would reduce operational impacts to water quality to less than significant. These measures would also ensure that the proposed project would not conflict with or obstruct the implementations of the Basin Plan for the San Francisco Bay Basin. Therefore, the proposed project would not otherwise substantially degrade water quality and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HYD-8 The proposed project would not 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.

As described in Section 4.9.1.2, *Existing Conditions*, the project site is not in a 100-year floodplain. Therefore, the proposed project would not place housing within a 100-year flood hazard area and there would be *no impact.*

Significance without Mitigation: No impact.

HYD-9 The proposed project would not place within a 100-year flood hazard area structures which would impede or redirect flood flows.

As described in Impact Discussion HYD-8, the project site is not within a 100-year flood hazard area and will therefore not result in structures that would impede or redirect flood flows. Accordingly, there would be *no impact*.

Significance without Mitigation: No impact.

HYD-10 The proposed project would not expose people or structures to a substantial risk of loss, injury, or death involving flooding.

As mentioned under Section 4.9.1.2, *Existing Conditions,* the project site is not within a dam inundation zone. The project site is also not within a 100-year flood hazard area or at risk of flooding due to the failure of a levee, tsunamis, or seiches. Therefore, the proposed project would not expose people or structures to a substantial risk of loss, injury, or death involving flooding, and there would be *no impact*.

Significance without Mitigation: No impact.

HYD-11 The proposed project would not expose people or structures to a substantial risk of loss, injury, or death as a result of inundation by seiche, tsunami, or mudflow.

The project site is not in a tsunami inundation area and is not at risk of inundation from seiches; however, there is a risk of a mudflow on the project site. As shown on Figure 4.6-1, *Seismic Hazard Zones*, in Chapter 4.6, *Geology and Soils*, of this Draft EIR the project site is within a landslide zone and therefore could be susceptible to mudflows.

As described in Chapter 4.6, *Geology and Soils*, of this Draft EIR, a project-specific Preliminary Geotechnical Report was prepared for the proposed project and included an assessment of the existing conditions. Based on the hillside development envelope and presence of shallow bedrock and lack of groundwater, liquefaction and densification at the project site are unlikely and considered to be insignificant. However, while the proposed development area is in an area of low seismic landslide hazards, some mapping indicates that previous landslides have occurred.[25, 26] According to the site-specific Geotechnical Report, based on the fact that the entire Viewcrest Drive area along and downslope of the project site has been extensively graded and developed, and the abundance of surficial volcanic float material and shallow rock outcropping, it is unclear as to the basis for this designation.[27] Site observations conducted for the preparation of the site-specific Preliminary Geotechnical Report did not yield any evidence of significant sliding.[28] However, the proposed project would be required to comply with OMC Section 15.04.3.2.065 and implement the specified grading and drainage methods for hillside development. Pursuant to SCA-39, *Seismic Hazards Zone (Landslide/Liquefaction),* the project applicant would be required to submit a site-specific geotechnical report prepared by a registered geotechnical engineer for City review and approval. The geotechnical report would be required to include, at a minimum, a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce hazards from liquefaction and/or slope stability. Compliance with the requirements of the OMC and SCA-39 would reduce the potential for substantial risk to people and structures as a result of mudflows, and impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

[25] United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed October 21, 2022.

[26] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Geotechnical Report*, of this Draft EIR.

[27] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Geotechnical Report*, of this Draft EIR.

[28] Henry Justiniano & Associates. 2015. *Preliminary Geotechnical and Geologic Evaluation,* August 5. See Appendix K, *Geotechnical Report*, of this Draft EIR.

HYD-12	**The proposed project would not 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.**

Development of the project site would not involve the alteration of any natural drainage channels or any watercourse. There is a small ephemeral creek that parallels the southern boundary of the proposed development area. Pursuant to SCA-58, *Creek Protection Plan*, the applicant prepared a Creek Protection Plan that includes measures to be implemented during construction that would minimize the potential for erosion or siltation and protect the water quality of the creek.[29] All proposed development will be offset a distance of at least 20 feet from the top of the creek bank. Mitigation Measure HYD-1 contains provisions that shall be implemented during the construction phase to ensure that no adverse impacts to the water quality of the creek south of the proposed development area would occur. In addition, all stormwater generated by the proposed project would be directed to the bioretention planter and hydromodification vault and then discharged to the existing storm drain system that is aligned beneath Chamberlin Court. There would be no discharge into the creek. Therefore, the proposed project would not substantially alter the existing drainage pattern of the creek, and compliance with measures in the Creek Protection Plan would minimize the potential for erosion, siltation, or flooding both on- or off-site. Impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HYD-13	**The proposed project would not fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources.**

As described in Section 4.9.1.1, *Regulatory Setting*, OMC Chapter 13.16 prohibits activities that would result in the discharge of pollutants to Oakland's waterways or cause damage to creeks, creek functions, or habitat. Factors to be considered when determining impacts to creeks include substantial degradation of riparian and aquatic habitat and alteration of creek hydrology through:

- Discharging a substantial amount of pollutants into a creek;
- Significantly modifying the natural flow of the water;
- Depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or
- Adversely impacting the riparian corridor by significantly altering vegetation or wildlife habitat.

There is a small ephemeral creek that parallels the southern boundary of the proposed development area. The unnamed creek follows a southwest alignment to a short, steep concrete chute and sump at the inlet to an 18-inch-diameter reinforced culvert pipe. The project applicant has applied for a Category 4 Creek

[29] Clearwater Hydrology, 2021. *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development,* March 27. See Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft EIR.

Protection Permit pursuant to the Creek Protection Ordinance. Although the proposed project includes a 20-foot setback from the top of the bank, it is possible that peripheral grading may encroach into the setback zone. As a result, the project qualifies as a Category 4 project.

The creek was surveyed upslope from the 18-inch culvert inlet for 141 feet. Dense poison oak stands prevented further upstream survey coverage. The objectives were to document existing channel hydraulic and geomorphic conditions, including noting the character and stability of the bed and banks of the channel, vegetation density, and the culvert inlet conditions. Since the magnitude of runoff that drains into the creek is low, and heavy grass, shrub and small tree growth are evident over most of the watershed, there was no evidence of bank instability along the surveyed channel reach. The concrete inlet chute, sump, and headwall also provide grade control at the lower end of the reach. Therefore, the creek does not require any stabilization.[30]

The creek's watershed area would be slightly reduced as a result of project development. However, no runoff from the project site would be diverted to the creek. Stormwater runoff from the site would be collected by bioretention planters and a hydromodification vault and discharged to the existing storm drain beneath Chamberlain Court. Furthermore, there will be a 20-foot setback from the creek bank to the edge of the developed property. A Revised Creek Protection Plan was prepared for the project site in March 2021, and recommendations in the plan have been incorporated as Mitigation Measure HYD-1 to ensure that construction activities in the vicinity of the creek do not result in erosion, sediment, or water quality impacts to the creek. In addition, the proposed project is required to comply with SCA-54, *NPDES C.3 Stormwater Requirements for Regulated Projects*, SCA-57, *Vegetation Management on Creekside Properties*, and SCA-58, *Creek Protection Plan*. SCA-54 pertains to site design, source control, and stormwater treatment measures that must be implemented; SCA-57 requires vegetation management on creekside properties; and SCA-58 requires development of a Creek Protection Plan. Compliance with the OMC, specifically OMC Section 13.16.200 (a) through (f), which identifies the criteria for creek protection that shall be met for permit approval, and Oakland SCAs, and implementation of the Creek Protection Plan would reduce impacts to the creek to *less than significant*.

Significance without Mitigation: Less than significant.

HYD-14 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to hydrology and water quality.

The geographic area for the analysis of cumulative hydrology and water quality impacts includes the areas within Oakland that discharge stormwater to the same storm drain system as the project site, with ultimate discharge into San Leandro Bay. Additional projects include cumulative growth associated with City-approved projects and other foreseeable future projects. Development of approved and future projects within Oakland could increase stormwater runoff and contribute to decreased water quality in receiving waters.

[30] Clearwater Hydrology, 2021. *Revised Creek Protection Plan and Hydrology Report for the Vistacrest Residential Development,* March 27. See Appendix G, *Creek Protection Plan and Hydrology Report*, of this Draft EIR.

All new development or redevelopment projects in Oakland would be required to comply with Alameda County's C.3 provisions that require best management practices to be implemented. These best management practices include site design, source control, and treatment control measures that provide flow control and treatment to runoff before it enters the storm drain system. Similarly, all projects would be required to comply with the CGP, prepare a SWPPP, and implement best management practices to minimize erosion and siltation impacts during construction.

When applicable, any new development within the city would be subject, on a project-by-project basis, to the applicable level of independent CEQA review as well as design guidelines, OMC requirements, Oakland SCAs, and other applicable City policies and procedures that reduce impacts related to hydrology and water quality. New projects would also be subject to review by the City's Public Works Department to ensure that stormwater discharge from the sites would not exceed the capacity of the City's storm drain system. For these reasons, impacts of the proposed project and approved and/or future projects on hydrology and water quality are not cumulatively considerable, and the cumulative impact would be *less than significant*.

Significance without Mitigation: Less than significant.

4.10 LAND USE AND PLANNING

This chapter includes an evaluation of the potential environmental consequences related to land use and planning from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing land use and planning in the vicinity of the proposed project.

4.10.1 ENVIRONMENTAL SETTING

4.10.1.1 REGULATORY FRAMEWORK

Regional Regulations

Plan Bay Area 2050

The Association of Bay Area Governments is the regional planning agency and council of governments for the nine-county San Francisco Bay Area, which includes Alameda County and the City of Oakland. The Metropolitan Transportation Commission and Association of Bay Area Governments' *Plan Bay Area 2050* is the Bay Area's Regional Transportation Plan/Sustainable Community Strategy. *Plan Bay Area 2050* was prepared by Metropolitan Transportation Commission in partnership with Association of Bay Area Governments, the Bay Area Air Quality Management District, and the San Francisco Bay Conservation and Development Commission and was adopted on October 21, 2021.[1] *Plan Bay Area 2050* sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by the California Air Resources Board. An overarching goal of *Plan Bay Area 2050* is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle miles traveled and associated greenhouse gas emissions reductions. The project site is not located within a Priority Development Area or Transit Priority Area.[2,3]

Local Regulations

Oakland General Plan

The Oakland General Plan Land Use and Transportation Element contains policies and implementation programs for land use in the city, categorized by industry and commerce, transportation and transit-

[1] Association of Bay Area Governments and the Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, accessed October 10, 2022, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf.

[2] Metropolitan Transportation Commission, updated July 2020, Priority Development Areas (Plan Bay Area 2050), accessed October 10, 2022, https://opendata.mtc.ca.gov/datasets/priority-development-areas-plan-bay-area-2050.

[3] Metropolitan Transportation Commission, updated August 2021, Transit Priority Areas (2021), accessed October 10, 2022, https://www.arcgis.com/apps/mapviewer/index.html?layers=370de9dc4d65402d992a769bf6ac8ef5.

oriented development, neighborhoods, waterfront, and downtown. Policies applicable to the proposed project related to land use and planning are outlined in Table 4.10-1*, Oakland General Plan Policies Relevant to Land Use and Planning and the Proposed Project*.

TABLE 4.10-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO LAND USE AND PLANNING AND THE PROPOSED PROJECT

Policy No.	Text
Land Use and Transportation	
N3.1	**Facilitating housing construction.** Facilitating the construction of housing units should be considered a high priority for the City of Oakland.
N6.1	**Mixing housing types.** The City will generally be supportive of a mix of projects that provide a variety of housing types, unit sizes, and lot sizes which are available to households with a range of incomes.
N7.1	**Ensuring compatible development.** New residential development in Detached Unit and Mixed Housing Type areas should be compatible with the density, scale, design, and existing or desired character of surrounding development.
N7.2	**Defining compatibility.** Infrastructure availability, environmental constraints and natural features, emergency response and evacuation times, street width and function, prevailing lot size, predominant development type and height, scenic values, distance from public transit, and desired neighborhood character are among the factors that could be taken into account when developing and mapping zoning designations or determining "compatibility". These factors should be balanced with the citywide need for additional housing.
N7.4	**Designing local streets.** Local streets should be designed to create an intimate neighborhood environment and not support high speed nor large volumes of traffic. Providing on-site parking for cars and bicycles, planting and maintaining street trees, and landscaping, minimizing the width of driveway curb cuts, maintaining streets, bike routes, and sidewalks, and orienting residential buildings toward the street all contribute to the desired environment.

Source: City of Oakland, March 1998, *City of Oakland General Plan*, *Land Use and Transportation Element*.

Oakland Municipal Code

The Oakland Municipal Code (OMC) contains all ordinances for the City. Title 17 of the OMC, the Oakland Planning Code, regulates physical development in Oakland and includes land use classifications and associated regulations for each. Chapter 17.13, *RH Hillside Residential Zones Regulations*, of the Oakland Planning Code includes regulations that development of properties in the RH Hillside Residential Zone must have plans approved pursuant to the design review procedure in Chapter 17.136, *Design Review Procedure*. Chapter 17.140, *Planned Unit Development Procedure*, of the Oakland Planning Code contains provisions on planned unit development (PUD) procedures, and Chapter 17.142, *Mini-Lot and Planned Unit Development Regulations*, contains regulations for mini-lots and PUDs. PUDs are described in Chapter 17.142 as "integrated development adhering to a comprehensive plan and located on a single tract of land of 60,000 square feet or more, or on two or more tracts of land equaling 60,000 square feet or more in total which may be separated only by a street or other right-of-way." For PUDs in RH-1 zoned areas, the maximum number of dwelling units is one per acre, excluding publicly dedicated streets, freeways, alleys, and paths; publicly owned land other than public housing sites; and land devoted to nonresidential facilities.

Land use plans, policies, or regulation adopted for the purpose of avoiding or mitigating an environmental effect are described in the regulatory setting of other environmental topic chapters of this Draft EIR. Specifically, these discussions are in Chapter 4.2, *Air Quality*; Chapter 4.3, *Biological Resources*;

Chapter 4.5, *Energy*; Chapter 4.7, *Greenhouse Gas Emissions*; Chapter 4.8, *Hazards and Hazardous Materials*; Chapter 4.9, *Hydrology and Water Quality*; Chapter 4.11, *Noise*; Chapter 4.15, *Transportation*; Chapter 4.16, *Utilities and Service Systems*; and Chapter 4.17, *Wildfire*. Some of these key municipal codes include:

- Chapter 12.36, *Protected Trees*. This chapter contains the City's tree protection regulations. Section 12.36.010, *Intent and findings*, acknowledges that trees contribute to the attractiveness and livability of the city and have significant psychological and tangible benefits, as well as contribute shade, moisture, climate, and wind control, and play a significant part in the local economy and ecosystem. For these reasons, the City requires tree removal to be permitted in order to control the amount and types of trees removed from the city. Section 12.36.060, *Conditions of approval*, includes conditions of approval for tree removal.
- Chapter 13.16, *Oakland Creek Protection, Storm Water Management and Discharge Control Ordinance*. The purpose of this ordinance is to eliminate non-stormwater discharges to the municipal storm sewers; to reduce pollutants in stormwater discharges to the maximum extent practicable; to safeguard and preserve creeks, riparian corridors, and creekside vegetation and wildlife; to prevent activities that would contribute significantly to flooding, erosion, sedimentation, or other destruction to riparian areas; to enhance recreational and beneficial uses of creeks; to protect drainage facilities; and to protect public health and safety as well as public and private property. Illicit discharge is defined in the ordinance as any discharge to the City's stormwater sewer system or any watercourse that is not composed entirely of stormwater, except as pursuant to a National Pollutant Discharge Elimination System permit or discharges resulting from firefighting activities.
- Chapter 15.74, *Transportation and Capital Improvement Impact Fees*. This chapter establishes citywide transportation and capital improvements impact fees to ensure that development projects pay their fair share to compensate for the increased demand for transportation and capital improvements infrastructure generated by such development projects within the City of Oakland. The impact fee for residential projects is calculated by multiplying the fee per housing unit by the number of additional housing units to be constructed. For residential projects, the impact fee amount is based on the project's impact fee zone as contained in the Master Fee Schedule and the maps in Section 15.74.150, *Impact fees zone maps*. Payment of the impact fees is due in one installment prior to the issuance of a building permit.

For a complete list and description of the applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect, please see the individual chapters of this Draft EIR listed above.

Oakland Complete Streets Policy

Oakland adopted the Complete Streets Policy in 2013 to further strive for safe and convenient travel options for all users on Oakland streets. A "complete street" is described as a

> … comprehensive, integrated transportation network, with roadways designed and operated to enable safe, attractive, and comfortable access and travel for all users, including: pedestrians, bicyclists, person with disabilities, seniors, children, motorists, movers of commercial goods,

operators of public transportation, public transportation users of all abilities, and emergency responders.[4]

The 2013 resolution adopting Complete Streets refers to the Bicycle Master Plan, Pedestrian Master Plan, General Plan Land Use and Transportation Element, and the California Environmental Quality Act (CEQA) Thresholds of Significance as supporting the purpose. The City will incorporate complete streets infrastructure into existing streets to improve safety, convenience, and connectivity. Maintenance, planning, and design of projects affecting the transportation system are to be consistent with the Bicycle and Pedestrian Master Plans, General Plan, and other relevant plans reflecting complete street principles.

4.10.1.2 EXISTING CONDITIONS

Surrounding Land Uses and Context

The project site is on the eastern hillsides of Oakland in the South Hills planning area of the Oakland General Plan's Land Use and Transportation Element.[5] The South Hills planning area is bordered by Interstate 580 and Highway 13 to the west, San Leandro to the south, and Contra Costa County to the east and separated from the North Hills planning area around the Crestmont neighborhood. The South Hills planning area is identified in the Land Use and Transportation Element as the most suburban section of Oakland, with large-scale, post-1960 developments of ranch-style homes. Neighborhoods are separated by open spaces and institutional land uses such as Merritt Community College. The Land Use and Transportation Element also identifies emergency vehicle access and evacuation on narrow hillside streets as a particular concern for this area.

Surrounding the project site are institutional, hillside residential, mixed-housing type residential, and resource conservation land uses, as designated in the Oakland General Plan. This includes Merritt Community College to the north across Campus Drive, single-family homes to the east along Campus Drive, condominiums of the Monte Vista Villas Homeowners Association to the south, and single-family homes on Viewcrest Drive to the west. In addition, Leona Canyon Regional Open Space Preserve is approximately 0.2 miles to the east of the project site, and Leona Heights Park is approximately 0.4 miles to the northwest.

Project Site

As described in Chapter 3, *Project Description*, of this Draft EIR, the project site is on undeveloped land in the Caballo Hills neighborhood, a single-family residential area. The project site is on hillside terrain and covered in vegetation, including ornamental vegetation, woodlands, coyote brush scrubland, and grasslands, and a small ephemeral creek runs downslope of the proposed development area. There are no buildings on-site. There are v-ditches throughout the site that guide on-site drainage.

[4] City of Oakland, January, 2013, *Resolution Adopting a Complete Streets Policy to Further Ensure that Oakland Streets Provide Safe and Convenient Travel Options for All Users*, http://www2.oaklandnet.com/oakca1/groups/pwa/documents/marketingmaterial/oak039959.pdf, accessed October 10, 2022.

[5] City of Oakland, March 1998, *City of Oakland General Plan, Land Use and Transportation Element*.

The Oakland General Plan Designations map, dated May 19, 2015, indicates the project site is designated Resource Conservation.[6] The objective of this designation is to conserve and manage undeveloped areas in Oakland that have high natural resource and/or scenic value or have natural hazards that preclude safe development.[7] According to the City's Zoning Map, dated December 11, 2018, the project site is zoned as Hillside Residential (RH-1). The intent of the RH-1 zone is to create and maintain residential areas that are on hillside lots. There are four types of Residential Hillside zones in the Oakland Planning Code. The RH-1 designation allows for single-family dwellings on lots of one acre or more and permits up to one family dwelling with a secondary unit.[8] A General Plan Conformity Determination is required for project approval in compliance with City of Oakland Planning Code, Section 17.01.070, *Determination of General Plan Conformity by Director of City Planning*. The OMC also allows for PUDs in the Oakland Planning Code Chapter 17.142, as "integrated development adhering to a comprehensive plan and on a single tract of land of 60,000 square feet or more, or on two or more tracts of land equaling 60,000 square feet or more in total which may be separated only by a street or other right-of-way."

4.10.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant land use and planning impact if it would:

1. Physically divide an established community.
2. Result in a fundamental conflict between adjacent or nearby land uses.
3. 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.
4. Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan.
5. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to land use and planning.

[6]City of Oakland, May 2015, *General Plan Designations*, https://cao-94612.s3.amazonaws.com/documents/General-Plan-Designations-20150519.pdf, accessed October 6, 2022.

[7] City of Oakland, June 1996, *City of Oakland General Plan, Open Space, Conservation, and Recreation Element*.

[8] City of Oakland *Planning Code*, Chapter 17.13, *RH Hillside Residential Zones Regulations*.

4.10.3 IMPACT DISCUSSION

LU-1 The proposed project would not physically divide an established community.

Projects with the potential to divide an established community typically include major highways or roadways, storm channels, utility transmission lines, or the closure of bridges or roadways. The physical division of an established community impairs mobility within that community or between it and outlying areas.

The proposed project would result in the construction and operation of ten single-family detached units and 17.4 acres of conservation open space development on what is currently undeveloped land. Existing surrounding roadways and land uses would be retained. Additionally, the project would include an internal roadway connecting the development to the existing street (Campus Drive). Based on the scope and size of the project and current land use, the implementation of the proposed project would not physically divide the established community, and this impact would be *less than significant*.

Significance without Mitigation: Less than significant.

LU-2 The proposed project would not result in a fundamental conflict between adjacent or nearby land uses.

A fundamental conflict between adjacent or nearby land uses would most likely result from the introduction of incompatible land uses such as industrial land uses that could emit noxious odors or hazardous emissions next to sensitive residential land uses. The project site is bounded by Campus Drive to the north and single-family residential development to the east, south, and west. The proposed project would continue the existing development pattern of detached single-family housing in the Caballo Hills neighborhood, and no fundamental conflict would result. Further, as discussed in Chapter 4.1, *Aesthetics;* Chapter 4.2, *Air Quality*; Chapter 4.7, *Greenhouse Gas Emissions;* Chapter 4.8, *Hazards and Hazardous Emissions*; Chapter 4.15, *Transportation*; and Chapter 4.17, *Wildfire*, the proposed project would not result in any view conflicts, hazardous emissions, or hazardous transportation conditions that would be in fundamental conflict with the surrounding land uses. Therefore, impacts related to fundamental land use conflicts with surrounding land uses would be *less than significant.*

Significance without Mitigation: Less than significant.

LU-3	**The proposed project would not 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.**

The proposed project would comply with the General Plan policies for land use and planning described in Section 4.10.1.1, *Regulatory Framework*, including facilitating the construction of housing in Oakland pursuant to Policy N3.1 and providing a mix of housing by providing clustered single-family homes pursuant to Policy N6.1. The proposed housing would be consistent with the RH-1 Zoning District. The proposed conservation open space area to be held in perpetuity would balance the preservation of existing vegetation and wildlife habitat with wildfire prevention, consistent with the Resources Conservation General Plan land use designation. As described in Impact Discussion LU-2, the proposed project would be compatible with the surrounding land uses pursuant to Policy N7.1 and Policy N7.2. Further, the proposed project would include adequate local street and parking designed for use by the future residents and their guests that is accessible by emergency use vehicles.

As discussed in Section 4.10.1.2*, Existing Conditions*, the project site is zoned RH-1 on the City of Oakland Zoning Map. The proposed project is classified as a PUD, which allows for evaluation of the proposed housing units as single-family units consistent with the RH-1 zoning. As described in Chapter 3, *Project Description,* of this Draft EIR, for PUDs in RH-1 zoned areas, the maximum number of dwelling units is one unit per acre of land. This zoning designation allows for a maximum of one home per acre, which would translate to 19 units, given the size of the project site. The proposed project includes the construction of ten homes, which is within the limit.

For the purposes of this EIR, a "land use" plan is a policy or regulation that addresses how land is used. The proposed project's potential to conflict with other applicable plans and regulations adopted for the purpose of avoiding or mitigating an environmental effect is discussed in detail in the other environmental topic chapters of this Draft EIR. Specifically, these discussions are in Chapter 4.2, *Air Quality*; Chapter 4.3, *Biological Resources*; Chapter 4.5, *Energy*; Chapter 4.7, *Greenhouse Gas Emissions*; Chapter 4.8, *Hazards and Hazardous Materials*; Chapter 4.9, *Hydrology and Water Quality*; Chapter 4.11, *Noise*; Chapter 4.15, *Transportation*; Chapter 4.16, *Utilities and Service Systems*; and Chapter 4.17, *Wildfire*. As discussed in these chapters, implementation of the proposed project would not conflict with or obstruct the implementation of any applicable plan or regulation adopted for the purposes of avoiding or mitigating an environmental effect.

The project would comply with the General Plan and OMC policies adopted for the purpose of mitigating an environmental effect. Impacts in this regard would be *less than significant*.

Significance without Mitigation: Less than significant.

LU-4	The proposed project would not fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan.

The project site is not in a habitat conservation plan or natural community conservation plan area. The nearest habitat or natural community conservation plan area is the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan area, over 10 miles east of the project site.[9] Therefore, the proposed project would have *no impact* on a habitat or natural community conservation plan.

Significance without Mitigation: No impact.

LU-5	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to land use and planning.

The cumulative setting for land use and planning takes into account growth resulting from the proposed project in combination with additional projects, including cumulative growth associated with City-approved projects and other foreseeable future projects. Overall growth in Oakland will continue to increase through 2040.

When applicable, any new development in the city would be subject, on a project-by-project basis, to the applicable level of independent CEQA review as well as design guidelines, OMC requirements, Oakland Standard Conditions of Approval, and other applicable City policies and procedures that reduce impacts related to land use and planning. Future development would be required to be consistent with the General Plan land use designations and zoning designations, or otherwise request a General Plan Conformity Determination, consistent with the City of Oakland Planning Code Section 17.01.070. Therefore, cumulative impacts of the proposed project and future projects on land use and planning would be *less than significant*.

Significance without Mitigation: Less than significant.

[9] East Contra Costa County Habitat Conservation Plan Association, October 2007, *Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*, https://www.cocohcp.org/DocumentCenter/View/1411/ECCC-HCP-NCCP---Vol-1-PDF-565-MB?bidId=, accessed October 10, 2022.

4.11 NOISE

This chapter includes an evaluation of the potential environmental consequences related to noise from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing noise in the vicinity of the proposed project, and identifies mitigation measures that would avoid or reduce significant impacts. The technical data and modeling used for this analysis are in Appendix H, *Noise Data*, of this Draft Environmental Impact Report (EIR).

4.11.1 ENVIRONMENTAL SETTING

The following are brief definitions of terminology used in this chapter.

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."
- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 p.m. to 10:00 p.m. and 10 dB from 10:00 p.m. to 7:00 p.m. NOTE: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive—that is, higher than

the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.

- **Peak Particle Velocity (PPV).** The peak signal value of an oscillating vibration velocity waveform, usually expressed in inches per second (in/sec).
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

4.11.1.1 REGULATORY FRAMEWORK

State Regulations

California Division of Occupational Safety and Health

The California Division of Occupational Safety and Health (CalOSHA) is the responsible State-level agency for ensuring workplace safety. CalOSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. The California Code of Regulations, Title 8, Subchapter 7, Group 15, Article 105, *Control of Noise Exposure*, sets noise exposure limits for workers and requires employers who have workers that may be exposed to noise levels above these limits to establish a hearing conservation program, make hearing-protector-devices available, and keep records of employee noise exposure measurements.

Local Regulations

Oakland General Plan

The Noise Element of the Oakland General Plan aims to protect Oakland's quality of life and the physical and mental well-being of residents in the city by reducing the community's exposure to noise. Mitigating noise incompatibilities among commercial, industrial, and residential lands uses also safeguards the City's economic welfare. The Noise Element provides citywide future (year 2025) traffic noise contours. Policies applicable to the proposed project are outlined in Table 4.11-1, *Oakland General Plan Policies Relevant to Noise and the Proposed Project*.

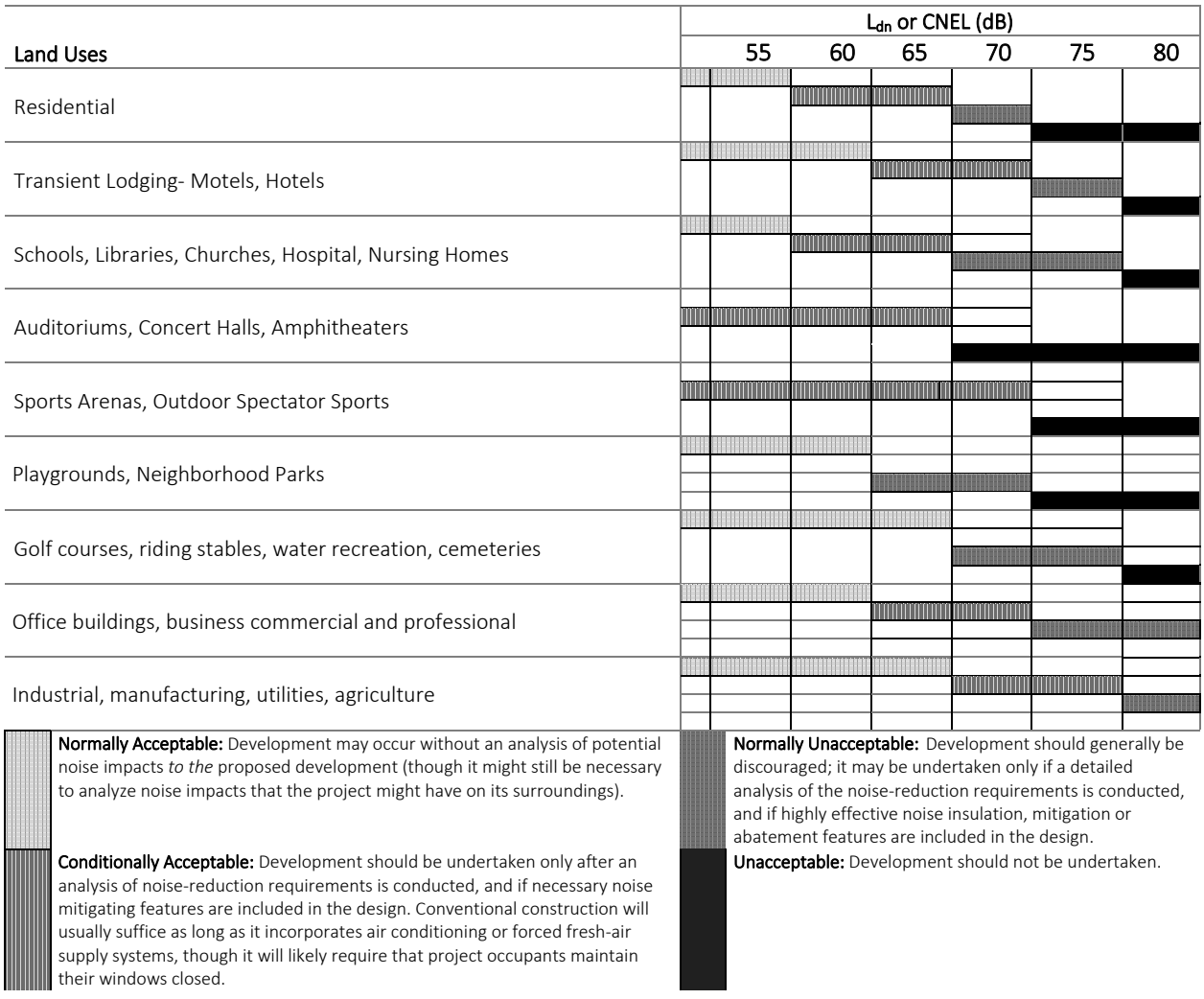
TABLE 4.11-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO NOISE AND THE PROPOSED PROJECT

Policy No.	Text
Noise Element	
1	Ensure the compatibility of existing and, especially, of proposed development projects not only with neighboring land uses but also with their surrounding noise environment.
2	Protect the noise environment by controlling the generation of noise by both stationary and mobile noise sources.
3	Reduce the community's exposure to noise by minimizing the noise levels that are received by Oakland residents and others in the City.

Source: City of Oakland, June 2005, *City of Oakland General Plan*, *Noise Element*.

The City of Oakland has adopted noise and land use compatibility standards for planning purposes that assist in determining land use compatibility with the existing noise environment. The noise and land use compatibility standards are shown in Table 4.11-2, *Oakland Noise and Land Use Compatibility Matrix*, and presented as normally acceptable, conditionally acceptable, normally unacceptable, and unacceptable, which are described in the table.

TABLE 4.11-2 OAKLAND NOISE AND LAND USE COMPATIBILITY MATRIX



Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts of noise to its residents. Section 17.120.050, *Noise,* of the OMC establishes noise standards for short-term and long-term construction and operational stationary noise standards. The OMC also includes specific exterior noise standards for residential air conditioning units and refrigeration systems stating that they shall not exceed of 50 dBA. Table 4.11-3, *Maximum Construction Noise Levels,* summarizes the OMC construction noise limits.

TABLE 4.11-3 MAXIMUM CONSTRUCTION NOISE LEVELS, DBA L_{EQ}

Duration	Land Use	Weekdays 7:00 a.m. to 7:00 p.m.	Weekends & Federal Holidays 9:00 a.m. to 8:00 p.m.
Short-term (less than 10 days)	Residential	80	65
	Commercial, Industrial	85	70
Long-term (10 days or more)	Residential	65	55
	Commercial, Industrial	70	60

Note: The nighttime noise levels received by any land use and produced by any construction or demolition activity between weekday hour of 7:00 p.m. and 7:00 a.m. or between 8:00 p.m. and 9:00 a.m. on weekends and federal holidays shall not exceed the applicable nighttime noise levels standards.
Source: City of Oakland Municipal Code.

The maximum allowable sound level from operational stationary noise sources at receiving residential properties, as codified in Section 17.120.050 of the OMC, shall not exceed:

- 60 dBA for a cumulative 20 minutes in any one hour (L_{33}), 7:00 a.m. to 10:00 p.m.
- 45 dBA for a cumulative 20 minutes in any one hour (L_{33}), 10:00 p.m. to 7:00 a.m.
- 65 dBA for a cumulative 10 minutes in any one hour (L_{16}), 7:00 a.m. to 10:00 p.m.
- 50 dBA for cumulative 10 minutes in any one hour (L_{16}), 10:00 p.m. to 7:00 a.m.
- 70 dBA for a cumulative 5 minutes in any one hour (L_{8}), 7:00 a.m. to 10:00 p.m.
- 55 dBA for a cumulative 5 minutes in any one hour (L_{8}), 10:00 p.m. to 7:00 a.m.
- 75 dBA for a cumulative 1 minute in any one hour (L_{2}), 7:00 a.m. to 10:00 p.m.
- 60 dBA for a cumulative 1 minute in any one hour (L_{2}), 10:00 p.m. to 7:00 a.m.
- 80 dBA for a cumulative 1 minute in any one hour (L_{max}), 7:00 a.m. to 10:00 p.m.
- 65 dBA for a cumulative 1 minute in any one hour (L_{max}), 10:00 p.m. to 7:00 a.m.

In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the stated applicable noise level shall be adjusted so as to equal the ambient noise level. Each of the noise standards shall be reduced by 5 dBA for a simple tone noise such as whine, screech, hum, noise consisting primarily of speech or music, or for recurring impulse noise such as hammering or riveting.

OMC Chapter 8.18, *Nuisance*, prohibits excessive and annoying noises. It is unlawful for any person to create or allow to be created any excessive or annoying noise as defined in this chapter and any violation of the regulations specified in the chapter shall be punishable as an infraction. According to Section 8.18.020, *Persistent Noises a Nuisance,* noise would constitute as a nuisance if the following best practices are not complied with:

- All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
- Unnecessary idling of internal combustion engines is prohibited.
- All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.
- Quiet construction equipment, particularly air compressors, are to be selected whenever possible.
- Use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following conditions are specific SCAs that are applicable to the proposed project and apply to noise:

- SCA-62. Construction Days/Hours: The project applicant shall comply with the following restrictions concerning construction days and hours:
  a) Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.
  b) Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.
  c) No construction is allowed on Sunday or federal holidays.

  Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in an unenclosed area.

  Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring, which may require more 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 within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.
- SCA-63. Construction Noise: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:
  a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.
  b) Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could

achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

c) Applicant shall use temporary power poles instead of generators where feasible.
d) Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.
e) The noisiest phases of construction shall be limited to less than ten days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

- SCA-64. Extreme Construction Noise:
  a) Construction Noise Management Plan Required. Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving, and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:
     i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
     ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
     iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
     iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and
     v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.
  b) Public Notification Required. 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.

- SCA-65. Project-Specific Construction Noise Reduction Measures: The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts on the nearest noise sensitive receptors. The project applicant shall implement the approved Plan during construction.

- SCA-66. Construction Noise Complaints: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to

construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:

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

- SCA-68. Operational Noise: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of Section 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.

- SCA-69. Exposure to Vibration: The project applicant shall submit a Vibration Reduction Plan prepared by a qualified acoustical consultant for City review and approval that contains vibration reduction measures to reduce groundborne vibration to acceptable levels per Federal Transit Administration (FTA) standards. The applicant shall implement the approved Plan during construction. Potential vibration reduction measures include, but are not limited to, the following:
  a) Isolation of foundation and footings using resilient elements such as rubber bearing pads or springs, such as a "spring isolation" system that consists of resilient spring supports that can support the podium or residential foundations. The specific system shall be selected so that it can properly support the structural loads and provide adequate filtering of groundborne vibration to the residences above.
  b) Trenching, which involves excavating soil between the railway and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project's structures. Since the reduction in vibration level is based on a ratio between trench depth and vibration wavelength, additional measurements shall be conducted to determine the vibration wavelengths affecting the project. Based on the resulting measurement findings, an adequate trench depth and, if required, suitable fill shall be identified (such as foamed styrene packing pellets [i.e., Styrofoam] or low-density polyethylene).

- SCA-70. Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located adjacent to the project site. 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.

4.11.1.2 EXISTING CONDITIONS

Certain land uses, such as residences, schools, and hospitals, are particularly sensitive to noise and vibration. Sensitive receptors include residences, senior housing, schools, places of worship, and recreational areas. These uses are regarded as sensitive because they are where citizens most frequently

engage in activities that are likely to be disturbed by noise, such as reading, studying, sleeping, resting, working from home, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not particularly sensitive to noise or vibration. Sensitive receptors to the proposed project include the single-family residences to the east and west of the project site and Merritt Community College to the northwest along Margie Lane. Because the proposed development area ranges from approximately 75 feet to 390 feet wide, most construction equipment would operate within 50 and 100 feet of the property line of the nearest noise sensitive receptors, which are the adjacent residences to east and west. The nearest Merritt Community College school building is approximately 550 feet north of the project site.

The nearest airport to the project site is the Oakland International Airport, approximately 4.5 miles to the southwest.[1] The proposed project is not in the Airport Land Use Compatibility Plan of the Oakland International Airport.

4.11.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant noise impact if it would:

1. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommended 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.
2. Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise.
3. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise.
4. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative 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). *[*Note: *Outside of a laboratory, a 3 dBA change is considered a just-perceivable difference. Therefore, 3 dBA is used to determine if the project-related noise increases are cumulative considerable. Project-related noise should include both vehicle trips and project operations]*
5. Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24).

[1] Airnav.com, 2022, Airport Information, accessed on November 4, 2022, http://www.airnav.com/airports.

6. 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.
7. Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]).
8. During either project construction or project operation expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA).
9. Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels.
10. Be located within the vicinity of a private airstrip and would expose people residing or working in the project area to excessive noise levels.
11. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to noise.

4.11.3 IMPACT DISCUSSION

Methodology

As defined in Section 4.11.1, *Environmental Setting,* the L_{eq} is the equivalent, steady sound level that, within a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. This is commonly referred to as the average noise level. The L_{max} is the highest sound level measured during a single noise event in which the sound level changes over time. It is useful for judging the interference caused by a noise event with common activities. In Oakland, the noise ordinance specifies a value for L_{max} for the construction noise limits (OMC Section 17.120.050). However, for the purposes of this analysis, the modeling uses L_{eq} because it is more useful as an average over a defined period.

NOI-1	**The proposed project would not generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise.**

Noise generated during construction is based on the type of equipment used, the location of the equipment relative to sensitive receptors, and the timing and duration of the noise-generating activities. Each activity phase of construction involves the use of different construction equipment, and therefore each activity phase has its own distinct noise characteristics. Noise levels from construction activities are dominated by the loudest piece of construction equipment. The dominant noise source is typically the engine, although work piece noise (such as dropping of materials) can also be noticeable. Construction activities associated with the proposed project would not require blasting or pile driving or other extreme noise-generating construction equipment. Heavy equipment, such as a bulldozer or a loader, can have maximum, short-duration noise levels of 85 dBA at 50 feet. Construction is anticipated to be completed in one development phase over approximately 15 months.

Table 4.11-4, *Project-Related Average Construction Noise Levels*, *dBA L_{eq}*, shows the modeled construction noise levels per activity phase. Noise levels from project-related construction activities were calculated from the simultaneous use of the loudest pieces of construction equipment during each phase at reference distances of 50 feet and 100 feet, as shown in Table 4.11-4. As previously stated, because the proposed development area ranges from approximately 75 feet to 390 feet wide, most construction equipment would operate within 50 to 100 feet of the property line of the nearest noise sensitive receptors, which are the adjacent residences to the east and west. The nearest Merritt Community College school building is approximately 550 feet north of the project site.

TABLE 4.11-4 PROJECT-RELATED AVERAGE CONSTRUCTION NOISE LEVELS, DBA LEQ

Construction Activity Phase	Loudest Equipment [a]	RCNM Reference Noise Level at 50 feet b	RCNM Reference Noise Level at 100 feet [b]	Noise Level at Merritt Community College at 550 feet [b]
Site Preparation	Grader 81.0 Tractor 80.0 Scraper 79.6	85	79	64
Rough Grading	Grader 81.0 Tractor 80.0 Scraper 79.6	86	79	65
Utility Trenching	Excavator 76.7	77	71	56
Fine Grading	Grader 81.0 Tractor 80.0 Dozer 77.7	85	79	64
Building Construction	Tractor 80 Generator 77.6 Crane 72.6	83	76	62
Asphalt Paving	Pavement Scarifier 82.5 Tractor 80.0 Drum Mixer 77	85	79	64
Architectural Coating	Air Compressors 73.7	74	68	53
Maximum Noise Level at Nearest Receptors		**86**	**79**	**65**
Exceeds Oakland Standard of 65 dBA		**Yes**	**Yes**	**No**

Notes:
a. Loudest pieces of equipment selected for the noise analysis pursuant to the CalEEMOD inputs.
b. Noise levels are rounded to the nearest decibel. Note that noise from construction equipment would be intermittent and diminishes at a rate of 6 dBA per doubling distance. The sound attenuation rate of 6 dBA is generally conservative and does not consider additional attenuation provided by existing buildings, structures, and natural landscapes around the project site.
Source: Roadway Construction Noise Model (see Appendix H, *Noise Data*, of this Draft EIR).

As shown in Table 4.11-4, construction noise would exceed the City's construction noise threshold of 65 dBA L_{eq} at the nearest noise sensitive receptors. The proposed project would be required to comply with SCA-62, *Construction Days/Hours*, which limits the days and hours of construction to avoid generating noise when it would be most objectionable to neighboring receptors. Construction activities would be limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday (among other restrictions) to prevent disturbance during sleep for residents in the project vicinity. SCA-62 also requires any extension of these work hours to be approved in advance by the City and requires property owners and occupants within 300 feet of the project site to be notified of such an extension. Pursuant to SCA-63,

Construction Noise, the proposed project would be required to implement basic noise reduction measures during construction, such as utilizing the best available noise control techniques and locating stationary noise sources as far from adjacent properties as possible. SCA-64, *Extreme Construction Noise*, requires the project applicant to prepare and implement a Construction Noise Management Plan that contains site-specific noise attenuation measures to reduce construction impacts associated with extreme noise-generating activities. Additionally, SCA-65, *Project Specific Construction Noise Reduction Measures*, requires the site-specific noise attenuation measures recommended by the Construction Noise Management Plan to be implemented during construction. The proposed project would also be required to adhere to SCA-66, *Construction Noise Complaints*, which provides additional measures to respond to and track noise complaints during construction to allow sources of potentially disruptive construction noise to be quickly controlled or eliminated. With the implementation of the Oakland SCAs described above, the impact of construction-generated noise would be reduced to a *less-than-significant* level.

Significance without Mitigation: Less than significant.

NOI-2 The proposed project would not generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise.

As discussed in Section 4.11.1.1, *Regulatory Framework*, OMC Section 8.18.020 states that failure to comply with the following would constitute a noise nuisance:

- All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
- Unnecessary idling of internal combustion engines is prohibited.
- All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.
- Quiet construction equipment, particularly air compressors, are to be selected whenever possible.
- Use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

The proposed project would be required to comply with OMC Section 8.18.020, including the prohibition of unnecessary idling of internal combustion engines. Furthermore, as stated in Impact Discussion NOI-1, the proposed project is required to comply with all applicable Oakland SCAs, including SCA-63, *Construction Noise*. SCA-63(b) requires noise reduction measures such as mufflers, intake silencers, engine enclosures, and acoustically attenuating shields or shrouds to avoid noise associated with compressed air exhaust from pneumatically powered tools. SCA-63(d) requires that stationary noise sources be as far from adjacent properties as possible; muffled and enclosed in temporary sheds; incorporated with insulation barriers; or use other noise reduction measures as determined by the City to provide equivalent noise reduction. SCA-62, *Construction Days/Hours*, prohibits any construction activity on Sunday or federal holidays. Therefore, compliance with the OMC and applicable Oakland SCAs would ensure the proposed project would not violate the City of Oakland's construction noise nuisance standards, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

NOI-3	**The proposed project would not generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise.**

The proposed project consists of ten single-family detached homes on a vacant undeveloped parcel of land adjacent to residential uses. Operational noise associated with the homes would include stationary sources such as heating, ventilation, and air conditioning (HVAC) equipment, and traffic noise from trips generated by the proposed project.

Though HVAC equipment would generate noise, equipment would be similar to that of existing adjacent uses yet would be newer and likely generate less noise. Additionally, noise generated from HVAC systems and activities associated with the proposed project would be subject to SCA-68, *Operational Noise*, requiring all operational noise to comply with the performance standards of Section 8.18.020 of the OMC and Chapter 17.120 of the Oakland Planning Code. Therefore, with mandatory implementation of SCA-68, the proposed project would not violate the City of Oakland's operational noise standards, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

NOI-4	**The proposed project would not 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).**

The proposed project would generate trips in the project vicinity, resulting in a permanent increase in traffic noise. Average daily traffic (ADT) volumes were provided by W-Trans for the study roadway segments.[2] Table 4.11-5, *Project Related Traffic Noise Increase*, *dBA L_{dn}*, shows the existing and future ADT volumes and associated traffic noise increases. Project-related noise increases were calculated by logarithmically comparing "Existing Plus Project" to "Existing No Project." Similarly, the cumulative traffic noise increase was calculated by logarithmically comparing "Future Plus Project" to "Existing No Project" volumes.

[2] W-Trans, July 2023, *Viewcrest Estates Residential Development CEQA Evaluation*.

TABLE 4.11-5 PROJECT-RELATED TRAFFIC NOISE INCREASE, DBA L_{DN}

	ADT Volumes				dBA L_{dn}	
Roadway Segment	Existing No Project	Existing Plus Project	Future No Project	Future Plus Project	Project Noise Increase	Cumulative Increase
Campus Drive – west of project	3,086	3,180	4,367	4,461	0.1	1.6
Campus Drive – east of project	2,323	2,417	3,457	3,551	0.2	1.8

Notes: ADT = Average Daily Trip
Source: ADT segment volumes provided by W-Trans.

As shown in Table 4.11-5, traffic noise increases due to the proposed project would be 0.2 dBA L_{dn} or less, and cumulative traffic would be 1.8 dBA L_{dn} or less. In all cases, projected traffic noise increases would be considered indiscernible in an exterior environment and would not result in a 3 dBA or 5 dBA permeant traffic noise increase. Therefore, this would be a *less-than-significant* impact.

Significance without Mitigation: Less than significant.

NOI-5 The proposed project would not 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).

The Oakland General Plan shows the project site and surrounding receptors to be partially within the 60 dBA L_{dn} noise contour. Noise levels within the 60 dBA L_{dn} contour range between 60 and 64.9 dBA L_{dn}. Typical exterior-to-interior noise attenuation for conventional residential construction is at least 20 dBA with windows closed.[3] With 20 dBA attenuation, interior noise levels would be 45 dBA L_{dn}. Additionally, the proposed project would be required to comply with SCA-67, *Exposure to Community Noise*, which requires the project applicant to submit a noise reduction plan prepared by a qualified acoustical engineer for City review and approval prior to the issuance of a construction-related permit. The noise reduction plan should contain noise reduction measures to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan and should be implemented during construction. Therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

[3] Highway Research Board, 1971, *National Cooperative Highway Research Program Report 117, Highway Noise: A Design Guide for Highway Engineers*, https://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_rpt_117.pdf, accessed November 4, 2022.

NOI-6	The proposed project would not 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.

Noise contours in the Oakland General Plan indicate that the existing noise ambient at the project site and nearby vicinity is within the 60 dBA L_{dn} noise contour. As stated in Impact Discussion NOI-5, noise levels within the 60 dBA L_{dn} contour range between 60 and 64.9 dBA L_{dn}. According to the City's noise and land use compatibility standards, shown in Table 4.11-2, *Oakland Noise and Land Use Compatibility Matrix,* ambient noise levels less than 60 dBA L_{dn} are considered normally acceptable, and noise levels between 60 to 70 dBA L_{dn} are considered conditionally acceptable for residential land uses. The project site would fall under the conditionally acceptable land use category. The Oakland General Plan indicates that development within a conditionally acceptable environment requires an analysis of noise-reduction requirements, and if necessary, noise mitigation features in the design.

Conventional building construction with windows closed provides a noise level reduction of at least 20 dBA, and therefore conventional construction would likely reduce interior noise levels to the acceptable level of 45 dBA L_{dn}. Additionally, the proposed project would be subject to SCA-67, *Exposure to Community Noise*, which requires noise reduction to be incorporated into building design based on the recommendations of a qualified acoustical engineer. SCA-67 specifically requires that reduction measures reduce interior noise levels to 45 dBA L_{dn} for residential activities. The noise control measures are required to be submitted to the City for review and approval prior to the issuance of a construction-related permit. Compliance with SCA-67 would ensure that the proposed project would not be exposed to excessive or incompatible noise levels, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

NOI-7	The proposed project would 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).

Construction workers could be exposed to excessive noise from the heavy equipment used during construction. However, noise exposure of construction workers is regulated by CalOSHA. As discussed in Section 4.11.1.1, *Regulatory Framework*, the California Code of Regulations, Title 8, Subchapter 7, Group 15, Article 105, *Control of Noise Exposure*, sets noise exposure limits for workers and requires employers who have workers that may be exposed to noise levels above these limits to establish a hearing conservation program, make hearing-protector-devices available, and keep records of employee noise exposure measurements. The construction contractors for the proposed project would be subject to these regulations, and compliance with these CalOSHA regulations would ensure that the potential of construction workers to be exposed to excessive noise is *less than significant*.

Significance without Mitigation: Less than significant.

NOI-8 The proposed project could expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration during either project construction or project operation.

The proposed project is expected to include construction equipment that can cause vibrational damage to existing buildings close to the project site. Construction operations can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight architectural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures.

For reference, a vibration level of 0.2 inches per second (in/sec) PPV is used as the limit for nonengineered timber and masonry buildings (which would apply to the surrounding residential structures).[4] Table 4.11-6, *Vibration Levels for Typical Construction Equipment*, summarizes vibration levels for typical construction equipment at a reference distance of 25 feet and at the nearest sensitive receptors.

TABLE 4.11-6 VIBRATION LEVELS FOR TYPICAL CONSTRUCTION EQUIPMENT

Equipment	Reference PPV (in/sec) at 25 feet	PPV (in/sec) at residence 13 feet to east	PPV (in/sec) at residence 33 feet to west
Vibratory Roller	0.21	0.560	0.138
Large Bulldozer	0.089	0.237	0.059
Small Bulldozer	0.003	0.008	0.002
Loaded Trucks	0.0076	0.203	0.050
Static Roller	0.05	0.133	0.033

Source: Federal Transit Administration, September 2018, Transit Noise and Vibration Impact Assessment Manual, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed November 4, 2022.

As shown in Table 4.11-6, typical construction equipment can generate vibration levels up to 0.21 in/sec PPV at 25 feet. Paving and grading activities could potentially occur at a distance of 13 feet from residential structures to the east during the proposed road expansion. These activities could include construction equipment such as vibratory rollers and a large bulldozer. Table 4.11-6 shows that construction vibration could generate levels of up to 0.56 in/sec PPV at 13 feet with use of a vibratory roller and up to 0.237 in/sec PPV with a large bulldozer.

[4] Federal Transit Administration, September 2018, Transit Noise and Vibration Impact Assessment Manual, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed November 4, 2022.

The proposed project would be required to comply with SCA-69, *Exposure to Vibration*, and SCA-70, *Vibration Impacts to Adjacent Historic Structures or Vibration-Sensitive Activities*. SCA-69 requires the project applicant to submit a vibration reduction plan prepared by a qualified acoustical consultant for City review and approval. The vibration reduction plan should contain vibration reduction measures to reduce groundborne vibration to acceptable levels pursuant to Federal Transit Administration standards. SCA-70 would require the project applicant to submit a vibration analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval. The vibrational analysis should establish pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities adjacent to the project site, as well as identify design means and methods of construction that shall be utilized in order to not exceed the thresholds.

In combination with SCA-69, *Exposure to Vibration*, and SCA-70, *Vibration Impacts to Adjacent Historic Structures or Vibration-Sensitive Activities*, implementation of Mitigation Measure NOI-8 would reduce vibration impacts to a less-than-significant level. Mitigation Measure NOI-8 specifically mitigates the anticipated equipment not to exceed the Federal Transit Administration vibration thresholds at the nearest structures as indicated in Table 4.11-6.

Impact NOI-8: The proposed project could result in the generation of excessive groundborne vibration in the vicinity of the project during the construction phase that would be in excess of established thresholds.

> Mitigation Measure NOI-8: If paving activity during construction is required within 25 feet of existing residential structures, use of a static roller in lieu of a vibratory roller shall be employed. Grading and earthwork activities within 15 feet of existing residential structures shall be conducted with off-road equipment that is limited to 100 horsepower or less, which would generate noise levels associated with a small bulldozer. This mitigation measure shall be identified on the permit application drawing set, as part of the construction drawing set, and included as part of the vibration studies conducted pursuant to Standard Conditions of Approval (SCA) 69, *Exposure to Vibration*, and SCA-70, *Vibration Impacts to Adjacent Historic Structures or Vibration-Sensitive Activities*, and shall be implemented by the on-site construction manager.
>
> Significance with Mitigation: Less than significant.

NOI-9 The proposed project would not be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels.

As described in Section, 4.11.1.2, *Existing Conditions,* the proposed project is not within an airport land use compatibility plan. Therefore, no impact would occur.

Significance without Mitigation: No impact.

NOI-10	The proposed project would not be located within the vicinity of a private airstrip and would expose people residing or working in the project area to excessive noise levels.

The nearest airport to the project site is the Oakland International Airport, approximately 4.50 miles to the southwest.[5] The proposed project would not expose people residing or working in the project area to excessive aircraft noise levels. Therefore, no impact would occur, and no mitigation measures are necessary.

Significance without Mitigation: No impact.

NOI-11	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to noise.

As shown in Table 4.11-5, cumulative traffic noise impacts would not be greater than established thresholds, and therefore, *less than significant*.

Cumulative construction noise impacts can occur when there are planned and approved projects within 500 feet of the proposed project site that would overlap with the proposed project construction schedule. There are no other planned and approved projects within 500 feet of the project site. Therefore, cumulative construction noise would be *less than significant*.

Significance without Mitigation: Less than significant.

[5] Airnav.com, 2022, Airport Information, http://www.airnav.com/airports, accessed November 4, 2022.

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4.12 POPULATION AND HOUSING

This chapter includes an evaluation of the potential environmental consequences related to population and housing from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing population and housing in the vicinity of the proposed project.

4.12.1 ENVIRONMENTAL SETTING

4.12.1.1 REGULATORY FRAMEWORK

State Regulations

California Housing Element law includes provisions related to the requirements for housing elements of local government general plans.[1] These requirements include an assessment of housing needs and an inventory of resources and constraints relevant to meet these requirements. Additionally, to ensure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goals, local jurisdictions must plan for and allow the construction of a share of the region's projected housing needs.

Regional Regulations

Association of Bay Area Governments Projections

The Association of Bay Area Governments (ABAG) is the official comprehensive planning agency for the San Francisco Bay region, which consists of the nine counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma, and contains 101 cities. ABAG produces growth forecasts that are used by other regional agencies to make project funding and regulatory decisions.

ABAG projections are the basis for the Regional Transportation Plan and the regional Ozone Attainment Plan. In this way, ABAG projections have practical consequences that shape growth and environmental quality. The general plans, zoning regulations, and growth management programs of local jurisdictions inform ABAG projections. The projections are also developed to reflect the impact of "smart growth" policies and incentives that could be used to shift development patterns from historical trends toward a better jobs-housing balance, increased preservation of open space, and greater development and redevelopment in urban cores and transit-accessible areas throughout their region.

Regional Housing Needs Allocation

Housing Element law requires local jurisdictions to plan for, and allow the construction of, a share of the region's projected housing needs. This share is called the Regional Housing Needs Allocation (RHNA). State law mandates that each jurisdiction provide sufficient land to accommodate a variety of housing

[1] Government Code Sections 65580 through 65589.8.

opportunities for all economic segments of the community to meet or exceed the RHNA. As the regional planning agency, ABAG is responsible for taking the overall RHNA provided by the State and preparing a formula for allocating housing needs by income level across its jurisdiction. ABAG calculates the RHNA for individual jurisdictions within Alameda County, including Oakland.

Local Regulations

Oakland General Plan

The Oakland General Plan 2023-2031 Housing Element was adopted by the City of Oakland, and the California Department of Housing and Community Development found Oakland's adopted Housing Element in full compliance with State Housing Element law (Article 10.6 of the Government Code) on February 17, 2023. Pursuant to the adopted 2023-2031 Housing Element, Oakland identified sites sufficient to accommodate 26,251 new housing units between 2023 and 2031.

In addition to the Housing Element, the Land Use and Transportation Element of the Oakland General Plan also includes policies and guidelines relating to population and housing. These are outlined in Table 4.12-1, *Oakland General Plan Policies Relevant to Population and Housing and the Proposed Project*.

TABLE 4.12-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO POPULATION AND HOUSING AND THE PROPOSED PROJECT

Policy No.	Text
Housing Element (2023-2031)	
2.1	Existing housing stock improvement
3.2	Create a more diverse mix of homes to meet community needs
3.6	Streamline the approval of new housing
3.8	Convert vacant land and units to housing
5.2	Promote resilient and sustainable development
Land Use and Transportation Element	
N3.1	Facilitating the construction of housing units should be considered a high priority for the City of Oakland.
N6.2	Housing developments that increase home ownership opportunities for households of all incomes are desirable.

Source: City of Oakland, *City of Oakland General Plan*, *Housing Element* (December 2014) and *Land Use and Transportation Element* (March 1998)

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to population and housing in Oakland. OMC Chapter 15.72, *Affordable Housing Impact Fees*, establishes affordable housing impact fees to ensure that market-rate residential development projects pay their fair share to compensate for the increased demand for affordable housing generated by such development projects. Section 15.72.050, *Amount of impact fees*, states that the impact fee shall be equal to the fee per housing unit multiplied by additional housing units. Pursuant to Section 15.72.070, *Payment of impact fees*, payment will be due in two installments of equal amounts: the first prior to the issuance of a building

permit, and the second prior to the issuance of a temporary certificate of occupancy, or certificate of occupancy, whichever occurs first.

Title 17, *Planning*, of the OMC includes Chapter 17.07, *Title, Purpose and Scope of the Zoning Code*, which, in addition to the General Plan, is the primary tool that shapes the form and character of physical development in Oakland. Chapter 17.13, *RH Hillside Residential Zones Regulations,* contains property development standards for hillside residential zones that enforce a certain level of consistency between these developments. Furthermore, the *Oakland Design Review Manual for One- and Two-Unit Residences* exists to complement the Oakland Planning Code.[2] The Design Review Manual provides certainty and predictability in the design review process through the establishment of uniform citywide decision-making criteria for all one- and two-unit projects subject to design review. Design review objectives are (1) create safe, attractive, and stable neighborhoods; (2) maintain property values; (3) provide attractive and highly livable housing that meets the needs of all Oakland residents; and (4) safeguard the City's architectural heritage.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions should be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCA is related to population and housing and is applicable to the proposed project:

- SCA-72. Affordable Housing Impact Fee: The project applicant shall comply with the requirements of the City of Oakland Affordable Housing Impact Fee Ordinance (Chapter 15.72 of the Oakland Municipal Code).

4.12.1.2 EXISTING CONDITIONS

The Oakland General Plan Housing Element 2023-2031 includes accommodating up to 26,251 new housing units between 2023 and 2031. As shown in Appendix C, *Sites Inventory*, of the 2023-2031 Housing Element, the project site is listed in Table C-14b, *Potential Development Projects, 2023-2031*.

The Oakland General Plan Designations map, dated May 19, 2015, indicates the project site is designated as Resource Conservation.[3] The objective of the Resource Conservation Area designation is to conserve and manage undeveloped areas in Oakland that have high natural resource and/or scenic value or have natural hazards that preclude safe development.[4] According to the City's Zoning Maps, dated December 11, 2018, the project site is zoned as Hillside Residential (RH-1). The intent of the RH-1 zone is to create and maintain residential areas that are on hillside lots. There are four types of Hillside Residential zones in the Oakland Planning Code. The RH-1 designation means Hillside Residential – 1 Zone. This zone allows for single-family dwellings on lots of one acre or more and permit up to one family dwelling with secondary

[2] City of Oakland, June 15, 2005, *Interim Design Review Manual for One- and Two-Unit Residences*, https://cao-94612.s3.amazonaws.com/documents/oak035210.pdf, accessed October 10, 2022.

[3] City of Oakland, May 2015, *General Plan Designations*, https://cao-94612.s3.amazonaws.com/documents/General-Plan-Designations-20150519.pdf, accessed October 6, 2022.

[4] City of Oakland, June 1996, *City of Oakland General Plan, Open Space, Conservation, and Recreation Element*.

unit.[5] A General Plan Conformity Determination is required for project approval in compliance with City of Oakland Planning Code Section 17.01.070, *Determination of General Plan conformity by Director of City Planning*.

According to the U.S. Census, Oakland had a population of 433,823 as of 2022. The California Department of Finance estimates a total of 182,729 housing units in 2022.[6] According to the California Department of Finance, the average household size for the City of Oakland as of 2022 is 2.4 persons per household.

4.12.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant population and housing impact if it would:

1. Induce substantial 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.
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.
4. In combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to population and housing.

4.12.3 IMPACT DISCUSSION

POP-1	**The proposed project would not induce substantial 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.**

The proposed project would result in the construction and operation of ten detached single-family units on a 2.6-acre development area and the conservation of open space on 17.4 acres within the 20-acre project site. The proposed project would directly contribute to housing supply through the construction of residential units and the conservation of open space to be held in perpetuity. Based on a projected average household size of 2.4 persons in Oakland, it is assumed the proposed project would introduce 24

[5] City of Oakland, *Planning Code*, Chapter 17.13, *RH Hillside Residential Zones Regulations*.

[6] California Department of Finance, May 2022, *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark*, https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/, accessed October 10, 2022.

new residents[7] to the project site, which would increase the number of residents on the site from 0 to 24 at buildout. Pursuant to the adopted 2023-2031 Housing Element, Oakland identified sites sufficient to accommodate 26,251 new housing units between 2023 and 2031. As shown in Appendix C, *Sites Inventory*, of the 2023-2031 Housing Element, the project site is listed in Table C-14b, *Potential Development Projects, 2023-2031*.

As described in Chapter 3, *Project Description*, of this Draft Environmental Impact Report (Draft EIR), the proposed ten-unit project is the type of development allowed under the RH-1 Zoning District. As described in Chapter 3, the City of Oakland accounts for inconsistencies between the General Plan and the Zoning Ordinance by requiring a General Plan Conformity Determination pursuant to Oakland Planning Code, Section 17.01.070. Therefore, the proposed project would require a General Plan Conformity Determination. As described in Chapter 3, the proposed project is classified as a Planned Unit Development (PUD), which provides a measure of flexibility with Planning Code requirements, including evaluation of the proposed housing units as single-family units consistent with the RH-1 zoning. PUDs are described in the Oakland Planning Code Chapter 17.142, *Mini-Lot and Planned Unit Development Regulations*, as "integrated development adhering to a comprehensive plan and on a single tract of land of 60,000 square feet or more, or on two or more tracts of land equaling 60,000 square feet or more in total which may be separated only by a street or other right-of-way." For PUDs in RH-1 zoned areas, such as the project site, the maximum number of dwelling units is one unit per one acre of land, excluding publicly dedicated streets, freeways, alleys, and paths; publicly owned land other than public housing sites; and land devoted to nonresidential facilities.[8] Accordingly, a total of 19 units could be accommodated on the project site, which is 9 units more than what is being proposed.[9]

The proposed project's roadway and utility infrastructure would only accommodate the proposed new homes and future residents on the 2.6-acre development area. The proposed 2.6-acre development area is bounded by Campus Drive to the north and single-family residential development to the east and west. To the south, the proposed development is bounded by the proposed 17.4-acre conservation open space area to be held as undeveloped lands in perpetuity to balance the preservation of existing vegetation and wildlife habitat with wildfire prevention, which is consistent with the Resources Conservation Area General Plan land use designation. Accordingly, due to the proposed project's limited roadway and utilities infrastructure and open space conservation area, the construction and operation of the proposed project would not indirectly induce substantial population growth in a manner not contemplated in the General Plan.

As described in Section 4.12.1.1, *Regulatory Framework,* the project would be required to implement SCA-72, *Affordable Housing Impact Fee*, to support the construction of affordable housing in Oakland through compliance with the requirements of the City of Oakland Affordable Housing Impact Fee Ordinance (OMC Chapter 15.72). The affordable housing units would mostly likely be infill housing in close proximity to existing development and infrastructure that would reduce environmental impacts; however,

[7] 10 new units multiplied by 2.4 persons per unit equals 24 new residents.

[8] City of Oakland, *Planning Code*, Section 17.142.110, *Development Standards parts A and B*.

[9] Total area of project site is 874,113 square feet (20 acres). Subtracting the area of the proposed Viewcrest Lane, which is 27,629 square feet (0.6 acres), the total developable area is 846,484 square feet (19.4 acres). 846,484 square feet divided by 43,560 square feet (1.0 acres) results in 19.4, or 19, total units.

the location and project-specific details for the construction and operation of these affordable units are unknown at this time. The construction of these housing units, like the proposed project, would be subject to environmental review, if required, once the City has determined how the fees will be applied to the construction and operation of future affordable housing in Oakland. While the payment of the affordable housing fees is mandatory, and affordable housing units are contemplated by the newly adopted Housing Element 2023-2031, because the project-specific details of future affordable housing units—location, number of units, heights, etc.—are unknown, it would be speculative and inappropriate to evaluate the impact of those future affordable housing units developed using mandatory fees collected by the project applicant in this Draft EIR.

As discussed in Chapter 4.10, *Land Use and Planning*; Chapter 4.13, *Public Services;* Chapter 4.14, *Recreation*; Chapter 4.15, *Transportation*; and Chapter 4.16, *Utilities and Service Systems,* of this Draft EIR, the proposed project is consistent with the General Plan Land Use and Zoning designations for the project site and would not cause the expansion of public service and recreation facilities or transportation and utilities infrastructure. Accordingly, the proposed project would not induce substantial population growth in a manner not contemplated in the General Plan, either directly or indirectly, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed, and impacts related to substantial unexpected population growth or growth for which inadequate planning has occurred would be *less than significant*.

Significance without Mitigation: Less than significant.

POP-2 The proposed project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.

As discussed in Chapter 3, *Project Description,* of this Draft EIR, the project site is currently undeveloped; therefore, there would be *no impact* relevant to displacing substantial numbers of existing housing units on the project site.

Significance without Mitigation: No impact.

POP-3 The proposed project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.

As discussed in Chapter 3, *Project Description,* of this Draft EIR, the project site is currently undeveloped; therefore, there would be *no impact* relevant to displacing substantial numbers of existing people on the project site. Additionally, as described in Section 4.12.1.1, *Regulatory Framework*, pursuant to OMC Chapter 15.72, the project applicant would contribute to the Affordable Housing Impact Fee Fund, which would ensure that the proposed market-rate residential development project pay its fair share to compensate for the increased demand for affordable housing.

Significance without Mitigation: No impact.

POP-4 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to population and housing.

The cumulative setting for population and housing accounts for growth resulting from the proposed project in combination with additional projects, including cumulative growth associated with City-approved projects and other foreseeable future projects.

The proposed project would add ten new housing units and 24 new residents to Oakland's housing stock and overall population, respectively, which is consistent with the newly adopted 6th Cycle Housing Element (2023-2031) and General Plan land use designation and Zoning District and is therefore addressed in a citywide cumulative setting. As demonstrated in Impact Discussion POP-1, the proposed project would not induce substantial population growth in a manner not contemplated in the General Plan, either directly or indirectly, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed, not would it result in impacts related to substantial unexpected population growth or growth for which inadequate planning has occurred on a citywide level.

With respect to the City's 2023-2031 RHNA obligation of 26,251 new housing units in the region between 2023 and 2031, the proposed project would help the City to meet its fair share of regional housing and would not cause the City to exceed this projected housing development, thus requiring additional cumulative analysis that has not already occurred. According to ABAG's 2040 buildout projections for Oakland, the proposed project's estimated population of 24 new residents would account for only 0.003 percent of the total 2040 population estimate (638,980). The proposed project would have a nominal contribution to population and housing growth in Oakland and would not contribute to cumulative growth that could cumulatively exceed planned levels of growth, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.13 PUBLIC SERVICES

This chapter includes an evaluation of the potential environmental consequences related to public services from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing public services in the vicinity of the proposed project. The public services analyzed in this chapter include: fire protection services, police services, schools, parks, and libraries.

The primary purpose of the public services impact analysis is to examine the impacts associated with physical improvements to public service facilities required to maintain acceptable service ratios, response times, or other performance objectives. Public service facilities need improvements (i.e., construction, renovation, or expansion) as demand for services increase. Increased demand is typically driven by increases in population. The proposed project would have a significant environmental impact if it would exceed the ability of public service providers to adequately serve residents, thereby requiring construction of new facilities or modification of existing facilities.

4.13.1 FIRE PROTECTION SERVICES

4.13.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

National Fire Protection Association 1710

National Fire Protection Association (NFPA) 1710 is the Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments. NFPA developed NFPA 1710 as an industry standard for the deployment of fire suppression operations to ensure safe and effective fire service operations. The Standard stipulates that the first fire engine should arrive to 90 percent of emergency calls within a range of 6 minutes and 15 seconds and 6 minutes and 45 seconds. It is recognized that the NFPA 1710 Standard is the optimal standard nationally.

State Regulations

California Building Code

The California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations, establishes the minimum State building standards. The CBC is currently updated every three years. The most recent update is the 2022 CBC, effective starting January 1, 2023. It is based on the 2021 International Building Code but has been amended to account for California and City of Oakland local conditions. The CBC is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan checked by City building officials for compliance with the CBC. Typical fire safety requirements of the CBC include

installation of sprinklers in all high-rise buildings; establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The California Fire Code (CFC) incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official Fire Code for the State and all political subdivisions. It is located in Part 9 of California Code of Regulations Title 24. Similar to the CBC, the CFC is revised and published approximately every three years by the California Building Standards Commission. The most recent update is effective starting January 1, 2023 and is based on the 2021 International Fire Code. The CFC contains regulations for safeguarding life and property from fire hazards, including setting certain building requirements regarding hazardous materials, storage, and occupancy.

Public Safety

Division 1 of Title 19, Public Safety, of the California Code of Regulations (CCR) pertains to fire and life safety and constitutes the Basic Building Design and Construction Standards of the Office of the State Fire Marshal. Title 19 includes prevention and engineering measures for new construction. Title 19 is regularly reviewed and updated by the Office of the State Fire Marshal.

California Health and Safety Code

The California Health and Safety Code provides regulations pertaining to the abatement of fire-related hazards. This Code also requires that local jurisdictions enforce the CBC, which provides standards for fire-resistant building and roofing materials and other fire-related construction methods, as discussed above.

Mitigation Fee Act (California Government Code 66000–66008)

Enacted as Assembly Bill (AB) 1600, the Mitigation Fee Act requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development plan on which it is to be levied. The Mitigation Fee Act came into force on January 1, 1989.

Local Regulations

Oakland General Plan

The Oakland General Plan Safety Element contains seven chapters: 1) Introduction, 2) Public Safety, 3) Geologic Hazards, 4) Fire Hazards, 5) Hazardous Materials, 6) Flooding, and 7) Hazards by Area. Chapter 2, *Public Safety*, discusses the framework through which the City of Oakland plans for, mitigates, responds to, and recovers from environmental disasters and emergencies and from public-safety incidents. Chapter 4, *Fire Hazards*, analyzes the City's risk from wildfires and structural fires, as well as the City's firefighting capabilities and water supply and roadway standards, and emergency routes. Policies applicable to the proposed project related to fire protection services are outlined in Table 4.13-1, *Oakland General Plan*

Policies Relevant to Fire Protection Services and the Proposed Project. Most of the fire prevention and management responsibilities lie with the Oakland Fire Department (OFD).

TABLE 4.13-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO FIRE PROTECTION SERVICES AND THE PROPOSED PROJECT

Policy No.	Text
Safety Element	
PS-1	Maintain and enhance the City's capacity to prepare for, mitigate, respond to and recover from disasters and emergencies.
FI-1	Maintain and enhance the City's capacity for emergency response, fire prevention and fire-fighting.
FI-2	Continue, enhance or implement programs that seek to reduce the risk of structural fires.
FI-3	Prioritize the reduction of the wildfire hazard, with an emphasis on prevention.

Source: City of Oakland, November 2004, *City of Oakland General Plan*, *Safety Element*.

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes various directives to minimize adverse impacts to fire protection services in Oakland. Chapter 15.12, *Oakland Fire Code*, of the OMC adopts the 2019 California Fire Code, amended in parts for Oakland. It establishes the Fire Prevention Bureau within the OFD. In addition, Article 9, *Fire Protection*, of Chapter 15.08, *Oakland Building Maintenance Code*, covers fire protection and requires all residential and non-residential buildings or structures to be provided with a degree of fire-resistive construction as required by the Oakland Building Construction Code and Oakland Fire Code. One of the amendments to the CBC for Oakland is the addition of Chapter 15.16, *Fire-Damaged Area Protection and Improvement Regulations*, which contains special construction requirements for fire-hazard areas in the area damaged by the 1991 Oakland hills fire.

OMC Chapter 15.74, *Transportation and Capital Improvement Impact Fees*, requires residential projects to pay a fee per housing unit to assure that development projects pay their fair share to compensate for the increased demand for transportation and capital improvements infrastructure generated by such projects. Section 15.74.110, *Capital Improvements Impact Fee Fund*, establishes funds that are to be used to pay for projects that are required for fire, police, library, parks and recreation, or storm drain services. As outlined in Section 15.74.050, *Amount of impact fees*, the impact fee for residential projects is calculated by multiplying the fee per housing unit but the number of additional housing units to be constructed. For residential projects, the impact fee amount shall be based upon the impact fee zone in which the development project is located as contained within the Master Fee Schedule and as set forth in the maps included in Section 15.74.150, *Impact fees zone maps*, of this chapter. Payment of the impact fees shall be due in one installment prior to the issuance of a building permit for all or any portion of the development project associated with the building permit and shall be in the amount of 100 percent of the impact fee.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated

into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCA is related to fire protection services and is applicable to the proposed project:

- SCA-73. Capital Improvements Impact Fee: 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).

Oakland Fire Department Vegetation Inspection Program

OFD's Vegetation Management Unit conducts approximately 26,000 public and private property inspections annually in the Oakland hills, much of which is designated as a very high fire hazard safety zone. Inspections are mandated by City of Oakland Ordinance No. 11640. The inspection area is divided into five districts (which differ from City Council Districts), each of which has an inspector.[1] The purpose of these inspections is to identify and mitigate hazards that could contribute to the spread, growth, and intensity of wildfire. Inspections are annual, and property owners are required to actively maintain their parcels in a fire-safe condition year-round. On City-owned and private lots, fire companies and vegetation management inspectors annually inspect properties to identify and notice those that are out of compliance with the defensible space standards in the City's Fire Code (OMC Chapter 15.12). If a property is not in compliance, inspections are repeated until the property is brought into compliance.

Existing Conditions

The OFD has the primary responsibility for preventing and suppressing fires in Oakland and provides emergency medical services throughout the city. The OFD comprises an Office of the Fire Chief, a Fiscal and Administration Services Division, a Field Operations Bureau, a Medical Services Division, an Emergency Management Services Division, a Fire Prevention Bureau, and a Support Services Bureau. The OFD maintains 25 fire stations with six divisions. According to the OFD 2022 Annual Report, the OFD consists of 564.20 sworn personnel for fire suppression/emergency response (24-hour shifts or 40-hour position assignments) and 174.68 authorized (full- and part-time) civilian personnel.[2] Each OFD fire station has at least one paramedic on staff, and all firefighters are certified emergency medical technicians. Combined daily staffing at all fire stations is made up of battalion chiefs, officers, fire engineers, and firefighters over three daily shifts. The equipment fleet comprises type one engines, type three engines, aerial ladders, brush patrols, fireboat, heavy-rescue vehicle, foam units, airport rescue rigs, and hose tenders.[3]

As discussed in Chapter 4.12, *Population and Housing*, of this Draft Environmental Impact Report (EIR), according to the U.S. Census, Oakland had a population of 433,823 as of 2022. Based on the 2022 population, the OFD fire suppression/emergency response personnel-to-resident ratio was approximately 1.3 OFD personnel per 1,000 residents. There is no adopted OFD fire suppression/emergency response

[1] City of Oakland Fire Department, November 2019, *Revised Draft: City of Oakland Vegetation Management Plan*, accessed October 10, 2022, https://cao-94612.s3.amazonaws.com/documents/Oakland-VMP_Revised-Draft_NOV-1-2019.pdf.

[2] City of Oakland, February 2, 2023, *The Oakland Fire Department 2022 Annual Report*, https://oaklandfiresafecouncil.org/wp-content/uploads/2022-Annual-Report-FINAL-2-2-23.pdf, accessed July 25, 2023,

[3] City of Oakland, November 2004, *City of Oakland General Plan*, *Safety Element*.

personnel-to-resident ratio in the city. The OFD has primary responsibility for fighting fires, conducting fire-safety inspections and plan checks, providing fire danger patrols, issuing public warnings of high fire danger, conducting vegetation management inspections, responding to hazardous materials spills, overseeing the Oakland Office of Emergency Services, issuing permits, offering first aid and basic emergency response training, and teaching fire safety to children in school. In addition, the City has agreements with other local jurisdictions for cooperative response to fires, including Alameda and Contra Costa Counties, the East Bay Regional Parks District, and the cities of Alameda, Berkeley, Emeryville, Piedmont, and San Leandro. For example, Contra Costa County includes the Moraga-Orinda Fire District and Contra Costa County Fire Protection District that may respond to a fire in the project area because they are close to the project site. OFD is a member of the Hills Emergency Forum, which is a coalition of government agencies and special districts coordinating information and management related to fire hazards in the Oakland Hills. OFD is also a member of the Diablo Fire Safe Council, which is a partnership among public and private sector organizations concerned with wildfire prevention in Alameda and Contra Costa Counties.[4] The OFD also sponsors California Task Force 4, a team of specialists trained in urban search and rescue.[5]

The OFD receives about 50,000 to 70,000 calls a year. In 2021, the OFD had 53,351 emergency responses, 3,210 fires extinguished, and 8,432 inspections.[6] The OFD aims to provide emergency service within 7 minutes of notification 90 percent of the time from when dispatch first receives the call to arrival on the scene. The OFD goal exceeds the NFPA 1710 standard range of 6 minutes and 15 seconds and 6 minutes and 45 seconds, which is recognized as the optimal standard nationally. The majority of Oakland is within a 1.5-mile radius from a fire station.[7] The closest OFD stations from the project site include Fire Station 21 at 13150 Skyline Boulevard, approximately 3.1 miles northeast of the project site, and Fire Station 25 at 2795 Butters Road, approximately 3.1 miles northwest of the project site.[8]

4.13.1.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant impact related to fire protection services if it would:

1. 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 fire protection services.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to fire protection services.

[4] City of Oakland, November 2004, *City of Oakland General Plan, Safety Element*.

[5] City of Oakland, November 2004, *City of Oakland General Plan*, *Safety Element*.

[6] City of Oakland, June 30, 2022, *Annual Comprehensive Financial Report for the Year Ended June 30, 2022*, accessed July 25, 2023, https://cao-94612.s3.amazonaws.com/documents/City-of-Oakland-FY22-ACFR.pdf

[7] City of Oakland, November 2004, *City of Oakland General Plan*, *Safety Element*.

[8] City of Oakland, February 2016, Oakland Fire Stations, accessed October 10, 2022, https://www.google.com/maps/d/viewer?msa=0&mid=1RCh6_XUzdvZA_cx7bKzF7bqGv04&ll=37.801708955974895%2C-122.09973237803865&z=12.

4.13.1.3 IMPACT DISCUSSION

PS-1 **The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.**

The primary purpose of a public services impact analysis is to examine the impacts associated with physical improvements to public service facilities required to maintain acceptable service ratios, response times or other performance objectives. Public service facilities may need improvements (i.e., construction, renovation, or expansion) as demand for services increase. Increased demand is typically driven by increases in population. The proposed project would have a significant environmental impact if it would exceed the ability of fire protection providers to adequately serve residents, thereby requiring construction of new facilities or modification of existing facilities.

As discussed in Chapter 4.12, *Population and Housing*, of this Draft EIR, according to the U.S. Census, Oakland had a population of 433,823 as of 2022. The proposed project would result in a net increase of ten detached single-family units and approximately 24 residents. The addition of ten residential units would increase the daytime and nighttime population on the project site and within the city, incrementally increasing the demand for emergency fire services and emergency medical services. Although the project site is currently undeveloped, the surrounding areas are already developed with residential neighborhoods and served by existing fire protection services. As discussed in Section 4.13.1.1, *Environmental Setting*, based on the 2022 population, the OFD fire suppression/emergency response personnel-to-resident ratio was approximately 1.3 OFD fire suppression/emergency response personnel per 1,000 residents. While there is no adopted suppression/emergency response personnel-to-resident ratio in the city, the increase in population and associated increase in calls for fire protection and emergency services from the proposed project would not warrant additional OFD personnel or the need for new or physically altered governmental facilities. The addition of 24 new residents to the project site would not substantially reduce the OFD fire suppression/emergency response personnel-to-resident ratio.

The closest OFD stations to the project site are Fire Station 21 and Fire Station 25, and both stations are approximately a 7-minute drive from the project site. While it is acknowledged that the OFD goal exceeds the NFPA 1710 standard range of 6 minutes and 15 seconds to 6 minutes and 45 seconds, which is recognized as the optimal standard nationally, the proposed project would allow OFD to meet its current goal of providing services within 7 minutes of notification. Access to the surrounding neighborhood and the proposed homes in particular would not be impeded by the development of the proposed project. Viewcrest Lane, a new street off Campus Drive, has been designed to accommodate all potential emergency response vehicles. Correspondence from OFD in July and December of 2019 confirmed that the proposed project would comply with OMC Chapter 15.12 for minimum road widths of 34 feet and a

minimum cul-de-sac diameter of 70 feet.[9, 10] Furthermore, the new circulation route would provide enhanced access to the existing open space and homes on Viewcrest Drive, downslope of the project site.

Prior to issuance of construction permits, the proposed project would include the payment of capital improvement impact fees, pursuant to SCA-73, *Capital Improvements Impacts Fee*, and OMC Section 15.74.110. The impact fees ensure that development projects pay their fair share to compensate for the increased demand for capital improvements infrastructure generated by such projects.

Due to the size and nature of the proposed project as a residential development with 24 projected occupants and its location within 7 minutes of two fire stations, the proposed project would not require new or physically altered fire protection facilities. Additionally, the proposed project would be required to pay capital improvement impact fees to offset its fair share of capital improvements impacts; therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-2 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to fire protection services.

The OFD is the primary fire protection service provider for Oakland. The cumulative setting for fire protection services takes into account growth resulting from the proposed project in combination with estimated growth in the services areas of each service provider. Overall growth in Oakland will continue to increase through 2040, which would require increased resources for fire protection services. However, as described in Impact Discussion PS-1, the proposed project would add 24 projected occupants and would not require new or physically altered fire protection facilities. The proposed project would comply with applicable regulations pertaining to fire safety (such as those in the Oakland General Plan, OMC, and Oakland SCAs). Because the proposed project would nominally increase population and would be required to pay impact fees to accommodate for growth, it would therefore not contribute to a cumulative impact to fire protection services, which typically requires physical expansion of facilities in order to expand services to a greater population or area in order to meet response time goals. Therefore, the proposed project would not result in a cumulatively considerable impact, and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

[9] Phillip Basada (fire protection engineer), July 12, 2019, Email to Dr. Collin Mbanugo (project applicant), Oakland Fire Department.

[10] Dr. Collin Mbanugo (project applicant), December 17, 2019, Letter to Dara O'Bryne (Oakland city planner).

4.13.2 POLICE SERVICES

4.13.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

Local Regulations

Oakland General Plan

The Oakland General Plan Safety Element contains seven chapters: 1) Introduction, 2) Public Safety, 3) Geologic Hazards, 4) Fire Hazards, 5) Hazardous Materials, 6) Flooding, and 7) Hazards by Area. Chapter 2, *Public Safety*, discusses the framework through which the City of Oakland plans for, mitigates, responds to, and recovers from environmental disasters and emergencies and from public-safety incidents. Policies applicable to the proposed project related to police services are outlined in Table 4.13-2, *Oakland General Plan Policies Relevant to Police Services and the Proposed Project*.

TABLE 4.13-2 OAKLAND GENERAL PLAN POLICIES RELEVANT TO POLICE SERVICES AND THE PROPOSED PROJECT

Policy No.	Text
Safety Element	
PS-1	Maintain and enhance the City's capacity to prepare for, mitigate, respond to and recover from disasters and emergencies.

Source: City of Oakland, November 2004, *City of Oakland General Plan*, *Safety Element*.

Oakland Municipal Code

The OMC includes various directives related to police services in Oakland. Under Section 2.29.020, *Police Department*, of the OMC, the City establishes a police department under the supervision of the City Administrator. Subject to the direction of the City Administrator, the Chief of Police oversees the management and operation of the OPD. OMC Section 10.08.080, *Authority of Police and Fire Department officers and members*, states that it's the duty of police officers to enforce all street traffic laws of the City and all of the state vehicle laws applicable to street traffic. They are also authorized to direct all traffic by voice, hand, or signal in conformance with traffic laws, as required.

OMC Chapter 15.74 requires residential projects to pay a fee per housing unit to ensure that development projects pay their fair share to compensate for the increased demand for transportation and capital improvements infrastructure generated by such projects. Section 15.74.110 establishes funds that are to be used to pay for projects that are required for fire, police, library, parks and recreation, or storm drain services. As outlined in Section 15.74.050, the impact fee for residential projects is calculated by multiplying the fee per housing unit by the number of additional housing units to be constructed. For residential projects, the impact fee amount shall be based upon the impact fee zone in which the development project is located, as contained within the Master Fee Schedule and as set forth in the maps included in Section 15.74.150. Payment of the impact fees shall be due in one installment prior to the issuance of a building permit for all or any portion of the development project.

Oakland Standard Conditions of Approval

The Oakland SCAs were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCA is related to police services and are applicable to the proposed project:

- SCA-73. Capital Improvements Impact Fee: 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).

Existing Conditions

The Oakland Police Department (OPD) has the responsibility of enforcing law and protecting public safety. The Police Administration building is at 455 7th Street in downtown Oakland, approximately nine miles west of the project site. Additionally, the OPD has two police stations, one in Fruitvale and one located in the southeastern part of Eastmont. The OPD Eastmont Substation, at 2651 73rd Avenue, is approximately 4 miles south of the project site. The OPD comprises three bureaus: the Bureau of Services, the Bureau of Field Operations, and the Bureau of Investigations.[11] The Bureau of Services provides department-wide functions including administration and accounting, communications, training, and recordkeeping. The Bureau of Field Operations handles neighborhood services, field support, special operations, and traffic operations. Finally, the Bureau of Investigations includes specialized units handling homicide, assault, arson, theft, missing persons, and narcotics. In January 2021, the OPD had 734 officers and 325 civilians.[12] As discussed in Chapter 4.12, *Population and Housing*, of this Draft EIR, according to the U.S. Census, Oakland had a population of 433,823 as of 2022. Based on the 2022 population, the officer to resident ratio was approximately 1.7 officers per 1,000 residents. There is no adopted officer-to-resident ratio in the city.

The city of Oakland is divided into five geographic areas, which are known as "Police Areas." The Bureau of Field Operations One oversees Police Areas 1 and 2, and the Bureau of Field Operations Two oversees Police Areas 3, 4, and 5. The project site is in Police Area 4, which comprises an east-west section of land from Fruitvale neighborhood to Merritt College and is patrolled by 69 officers.[13, 14]

Incoming calls to the OPD are prioritized based on the nature of the call. Calls for police services are ranked into three priorities:

- Priority 1: Situations involving imminent injury of persons and for prevention of violent crime and incidents involving a weapon.

[11] City of Oakland, November 2004, *City of Oakland General Plan*, *Safety Element*.

[12] City of Oakland, June 30, 2022, *Annual Comprehensive Financial Report for the Year Ended June 30, 2022*, https://cao-94612.s3.amazonaws.com/documents/City-of-Oakland-FY22-ACFR.pdf, accessed July 25, 2023.

[13] City of Oakland, Oakland Council Districts & Police Beats, Districts, https://oakgis.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=12ae8a087be44043abc6996c5e499d5c, accessed October 11, 2022.

[14] City of Oakland, September 23, 2022, *Memorandum: Quarterly Police Staffing Report (2nd Quarter)*, https://cao-94612.s3.amazonaws.com/documents/OPD-Q2-Staffing-Memo-9.23.22.pdf, accessed October 11, 2022.

- Priority 2: Urgent, but not immediate emergencies including in-progress misdemeanors, in-progress disputes with violence potential, stolen vehicle reports, and just-occurred felonies.
- Priority 3: Cold reports and situations where there is no threat of danger to life or property.

OPD maintains a goal of answering calls for services with dispatchers and operators within the first 15 seconds for 95 percent of these calls but there is no adopted OPD response time goal. According to the September 23, 2022, *2nd Quarter Police Staffing Report*, the average response time to respond with an officer or other personnel to each Priority 1 call was about 18 minutes and 56 seconds between January and June 2022.[15]

4.13.2.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant impact to police services if it would:

1. 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 police services.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to police services.

4.13.2.3 IMPACT DISCUSSION

PS-3	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police services.**

The primary purpose of a public services impact analysis is to examine the impacts associated with physical improvements to public service facilities required to maintain acceptable service ratios, response times or other performance objectives. Public service facilities may need improvements (i.e., construction, renovation, or expansion) as demand for services increase. Increased demand is typically driven by increases in population. The proposed project would have a significant environmental impact if it would exceed the ability of public service providers to adequately serve residents, thereby requiring construction of new facilities or modification of existing facilities. As discussed in Chapter 4.12, *Population and Housing*, of this Draft EIR, according to the U.S. Census, Oakland had a population of 433,823 as of 2022. Overall

[15] City of Oakland, September 23, 2022, *Memorandum: Quarterly Police Staffing Report (2nd Quarter)*, https://cao-94612.s3.amazonaws.com/documents/OPD-Q2-Staffing-Memo-9.23.22.pdf, accessed October 11, 202

growth in the City of Oakland will continue to increase through 2040, and the proposed project would result in a net increase of ten detached single-family dwelling units and approximately 24 residents.

Although the project site is currently undeveloped, the surrounding areas are already developed with residential neighborhoods and served by existing police services. As discussed in Section 4.13.2.1, *Environmental Setting*, the project site is in OPD Police Area 4, which is patrolled by 69 officers. The OPD overall, as of the end of 2021, employed 734 officers and 325 civilians. Based on the 2022 population, the officer-to-resident ratio was approximately 1.7 officers per 1,000 residents. While there is no adopted officer-to-resident ratio in the city, the increase in population and associated increase in calls for service from the proposed project would not warrant additional police personnel or the need for new or physically altered governmental facilities because the addition of 24 new residents to the project site would not substantially decrease the officer-to-resident ratio. The proposed project would also include the payment of capital improvement impact fees pursuant to SCA-73, *Capital Improvements Impact Fee*, and OMC Chapter 15.74. The impact fees ensure that development projects pay their fair share to compensate for the increased demand for capital improvements infrastructure generated by such projects.

Development of the existing project site with residential uses would not substantially increase the demand for police services in a citywide context. The development of a vacant and/or underutilized site and the construction of ten new dwelling units would increase the daytime and nighttime population on the site, incrementally increasing the demand for police services. However, it is not anticipated that new staff or new facilities would be needed to serve the additional population. The OPD would continue to provide services to the project site and would not require additional officers to serve the project site. Due to the size and nature of the proposed project as a residential development with 24 projected occupants and its location in an existing Police Area, the proposed project would not require new or physically altered governmental facilities. Additionally, the proposed project would be required to pay capital improvement impact fees to offset its fair share of capital improvements impacts; therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-4 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to police services.

The OPD is the main police service provider for the City of Oakland. The cumulative setting for police services takes into account growth resulting from the proposed project in combination with estimated growth in the services areas of each service provider. Overall growth in Oakland will continue to increase through 2040, which would require increased resources for police services. However, as described under Impact Discussion PS-3, the proposed project would add only 24 projected occupants and would not require new or physically altered governmental facilities. The proposed project would comply with Oakland SCAs and regulations in the OMC. Because the proposed project would nominally increase population and would be required to pay impact fees, it would not contribute to a cumulative impact to police services, which typically requires physical expansion of facilities to expand services to a greater

population or area. Therefore, the proposed project would not result in a cumulatively considerable impact, and the cumulative impact would be *less than significant*.

Significance without Mitigation: Less than significant.

4.13.3 SCHOOLS

4.13.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

Senate Bill 50

Senate Bill (SB) 50 (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available, whether the school district is eligible for State funding, and whether the school district meets certain additional criteria involving bonding capacity, year-round school, and the percentage of moveable classrooms in use.

California Government Code, Section 65995(b), and Education Code Section 17620

SB 50 amended California Government Code Section 65995, which contains limitations on Education Code Section 17620, the statute that authorizes school districts to assess development fees within school district boundaries. Government Code Section 65995(b)(3) requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. Per California Government Code Section 65995, the payment of fees is deemed to fully mitigate the impacts of new development on school facilities.

Mitigation Fee Act (California Government Code 66000–66008)

Enacted as AB 1600, the Mitigation Fee Act requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development plan on which it is to be levied. The Act came into force on January 1, 1989.

Local Regulations

Oakland General Plan

The Oakland General Plan Land Use and Transportation Element contains policies and implementation programs for land use in the City, categorized by industry and commerce, transportation and transit-

oriented development, neighborhoods, waterfront, and downtown. Policies applicable to the proposed project related to school services are outlined in Table 4.13-3, *Oakland General Plan Policies Relevant to School Services and the Proposed Project*. The Oakland Unified School District (OUSD) is the primary educational service provider for Oakland.

TABLE 4.13-3 OAKLAND GENERAL PLAN POLICIES RELEVANT TO SCHOOLS AND THE PROPOSED PROJECT

Policy No.	Text
Land Use and Transportation Element	
N12.2	**Making Schools Available.** Adequate public school capacity should be available to meet the needs of Oakland's growing community. The City and the Oakland Unified School District (OUSD) should work together to establish a continuing procedure for coordinating residential and commercial development and exploring residential and commercial development and exploring the imposition of mutually agreed upon reasonable and feasible strategies to provide for adequate school capacity. The City and OUSD should jointly consider where feasible and appropriate, finding mechanisms such as assessment districts, Redevelopment Agency funding (AB 1290), use of surplus, City-owned land, bond issues, and adjacent or shared use of land or school facilities with recreation, libraries, childcare and other public uses.

Source: City of Oakland, March 1998, *City of Oakland General Plan*, *Land Use and Transportation Element*.

Existing Conditions

The OUSD contains 80 schools, split into five networks—Networks Two, Three, and Four consist of schools from kindergarten through fifth or eighth grade, a Middle School Network, and a High School Network.[16] In the 2021-22 school year, 34,566 students were enrolled in OUSD-run schools and programs.[17] OUSD calculates student generation rates by using 0.274 students per residential unit.

OUSD schools in the vicinity of the project site include Hintil Kuu Ka Preschool, Buckhalter Elementary School, Carl Munck Elementary School, Community Day Middle School, and Skyline High School.

4.13.3.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant impact on schools if it would:

1. 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 schools.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to schools.

[16] Oakland Unified School District, 2022, School Directory, https://www.ousd.org/Page/18603, accessed October 11, 2022.

[17] Oakland Unified School District, January 2022, Fast Facts: 2021-22, https://drive.google.com/drive/folders/0B6QEqRqzjxxzOGllWlBUS2d2ZXc?resourcekey=0-7sk8AIBhsI4Qp01bD68R6Q, accessed October 11, 2022.

4.13.3.3 IMPACT DISCUSSION

PS-5	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.**

The primary purpose of a public services impact analysis is to examine the impacts associated with physical improvements to public service facilities required to maintain acceptable service ratios, response times, or other performance objectives. Public service facilities may need improvements (i.e., construction, renovation or expansion) as demand for services increase. Increased demand is typically driven by increases in population. The proposed project would have a significant environmental impact if it would exceed the ability of public service providers to adequately serve residents, thereby requiring construction of new facilities or modification of existing facilities. As discussed in Chapter 4.12, *Population and Housing*, of this Draft EIR, overall growth in the City of Oakland will continue to increase through 2040, and the proposed project would result in a net increase of ten detached single-family dwelling units and approximately 24 residents. Although the project site is currently undeveloped, the surrounding areas are already developed with residential neighborhoods and serviced by existing school facilities. Schools in the vicinity of the project site include Hintil Kuu Ka Preschool, Buckhalter Elementary School, Carl Munck Elementary School, Community Day Middle School, and Skyline High School. According to the OUSD student generation rate, the proposed project would have 2 or 3 school-aged residents who would attend one of the nearby schools.[18]

Due to the size and nature of the proposed project as a residential development with 24 projected occupants, of which 2 or 3 are projected to attend an OUSD school, the proposed project would not require new or physically altered governmental facilities. Therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-6	**The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to schools.**

The OUSD is the primary educational service provider for Oakland. The cumulative setting for school services takes into account growth resulting from the proposed project in combination with estimated growth in the services areas of each service provider. Overall growth in Oakland will continue to increase through 2040, which would require increased resources for school services. However, as described under

[18] 0.274 students x 10 residential units = 2.74 students.

Impact Discussion PS-5, the proposed project would add only 24 projected occupants and would not require new or physically altered governmental facilities. Because the proposed project would nominally increase population, it would therefore not contribute to a cumulative impact to school services, which typically requires physical expansion of facilities in order to expand services to a greater population or area. Therefore, the proposed project would not result in a cumulatively considerable impact, and the cumulative impact would be *less than significant*.

Significance without Mitigation: Less than significant.

4.13.4 LIBRARIES

4.13.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

Mello-Roos Community Facilities Act

The Mello-Roos Community Facilities Act, Government Code Section 53311 et seq., provides an alternate method of financing certain public capital facilities and services through special taxes. This State law empowers local agencies to establish community facilities districts (CFD) to levy special taxes for facilities such as libraries. The City of Oakland formed a CFD in 2015 that is managed by the Department of Public Works.[19] The CFD provides a parcel tax on properties in the City Gateway Industrial District to fund maintenance of the public roads and infrastructure. The project site is not in the Gateway Industrial District.

Local Regulations

Oakland Municipal Code

The OMC includes various directives related to libraries in Oakland. Under OMC Section 2.29.110, *Oakland Public Library Department*, the City establishes the Oakland Public Library Department under supervision and administrative control of the City Administrator. OMC Chapter 15.74 requires residential projects to pay a fee per housing unit to ensure that development projects pay their fair share to compensate for the increased demand for transportation and capital improvements infrastructure generated by such projects. Section 15.74.110 establishes funds that are to be used to pay for projects that are required for fire, police, library, parks and recreation, or storm drain services. As outlined in Section 15.74.050 the impact fee for residential projects is calculated by multiplying the fee per housing unit but the number of additional housing units to be constructed. For residential projects, the impact fee amount shall be based upon the impact fee zone in which the development project is located as contained within the Master Fee Schedule and as set forth in the maps included in Section 15.74.150 of this chapter. Payment of the

[19] City of Oakland, 2022, Community Facilities District (CFD) & Maintenance, https://www.oaklandca.gov/topics/community-facilities-district-cfd-maintenance, accessed October 11, 2022.

impact fees shall be due in one installment prior to the issuance of a building permit for all or any portion of the development project associated with the building permit, and shall be in the amount of 100 percent of the impact fee.

Oakland Standard Conditions of Approval

The Oakland SCAs were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCA is related to libraries and is applicable to the proposed project:

- SCA-73. Capital Improvements Impact Fee: 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).

Oakland Public Library Master Facilities Plan

Drafted in 2006, the Oakland Public Library Master Facilities Plan laid out plans to revitalize the central branch of the Oakland Public Library system.[20] The plan identifies needs for technological and infrastructural improvements to accommodate modern demands, focusing on technical improvements to the main library, but providing insight into the vision for the library system. The plan evaluates Oakland with a three-tier system—neighborhood branches, community branches and the central library—each of which has room for facility and service improvements.

Existing Conditions

The Oakland Public Library (OPL) has 16 branch libraries, with a Main Library near downtown Oakland on 14th Street.[21] OPL also has a Second Start Adult Literacy Program, a Tool Lending Library, the African-American Museum and Library at Oakland, and the Oakland History Center. OPL offers many services, including book rental, computer and internet access, and community event space. During fiscal year 2020-21, OPL patrons borrowed 616,510 physical items (books, DVDs, CDs, etc.), over 86,000 digital magazines, over 70,100 digital audiobooks, and 65,293 streaming movies.[22] The Eastmont neighborhood branch on Bancroft Avenue is the nearest branch, 1.3 miles southwest of the project site.

4.13.4.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant libraries impact if it would:

[20] City of Oakland, June 2006, *Oakland Public Library Master Facilities Plan*. http://www2.oaklandnet.com/oakca1/groups/ceda/documents/webcontent/oak049319.pdf, accessed October 11, 2022.

[21] Oakland Public Library, 2022, About Us, https://oaklandlibrary.org/about-the-library/, accessed October 11, 2022.

[22] Oakland Public Library, *Annual Report: 2020-2021*, https://oaklandlibrary.org/wp-content/uploads/sites/100/2021/12/OPL_Annual_2021_booklet.pdf, accessed October 11, 2022.

1. 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 libraries.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to libraries.

4.13.4.3 IMPACT DISCUSSION

PS-7 **The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for libraries.**

The primary purpose of a public services impact analysis is to examine the impacts associated with physical improvements to public service facilities required to maintain acceptable service ratios, response times or other performance objectives. Public service facilities may need improvements (i.e., construction, renovation or expansion) as demand for services increase. Increased demand is typically driven by increases in population. The proposed project would have a significant environmental impact if it would exceed the ability of public service providers to adequately serve residents, thereby requiring construction of new facilities or modification of existing facilities. As discussed in Chapter 4.12, *Population and Housing*, of this Draft EIR, overall growth in the City of Oakland will continue to increase through 2040, and the proposed project would result in a net increase of ten detached single-family dwelling units and approximately 24 residents. Although the project site is currently undeveloped, the surrounding areas are already developed with residential neighborhoods and serviced by existing library facilities. The Eastmont neighborhood branch on Bancroft Avenue is the nearest branch, 1.3 miles southwest of the project site.

The proposed project would also include the payment of capital improvement impact fees, pursuant to SCA-73, *Capital Improvements Impact Fee*, and OMC Chapter 15.74. The impact fees ensure that development projects pay their fair share to compensate for the increased demand for capital improvements infrastructure generated by such projects.

Due to its size and nature—a residential development with 24 projected occupants—the proposed project would not require new or physically altered library facilities. Additionally, the proposed project would be required to pay capital improvement impact fees to offset its fair share of capital improvements impacts; therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-8	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to libraries.

The Eastmont neighborhood library branch on Bancroft Avenue is the nearest branch, 1.3 miles southwest of the project site. The cumulative setting for libraries takes into account growth resulting from the proposed project in combination with estimated growth in the service areas of each service provider. Overall growth in Oakland will continue to increase through 2040, which would require increased resources for library services. However, as described under Impact Discussion PS-7, the proposed project would add only 24 projected occupants and would comply with Oakland SCAs and regulations in the OMC. Because the proposed project would nominally increase population and would be required to pay impact fees to accommodate for growth, it would therefore not contribute to a cumulative impact to library services, which typically requires physical expansion of facilities in order to expand services to a greater population or area. Therefore, the proposed project would not result in a cumulatively considerable impact, and the cumulative impact would be *less than significant*.

Significance without Mitigation: Less than significant.

4.14 RECREATION

This chapter includes an evaluation of the potential environmental consequences related to recreation from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing recreation in the vicinity of the proposed project.

4.14.1 ENVIRONMENTAL SETTING

4.14.1.1 REGULATORY FRAMEWORK

State Regulations

Quimby Act

The Quimby Act (California Government Code Section 66477) authorizes cities and counties to adopt ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for operation and maintenance of park facilities.[1] A 1982 amendment (Assembly Bill 1600) requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or parkland and the type of development project upon which the fee is imposed. Cities with a high ratio of park space to inhabitants can set a standard of up to 5 acres per 1,000 persons for new development. Cities with a lower ratio can only require the provision of up to 3 acres of park space per 1,000 persons. The calculation of a city's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of City-owned parkland.

Regional Regulations

East Bay Regional Park District Master Plan 2013

The East Bay Regional Parks District (EBRPD) is comprised of a system of parklands and trails located in Alameda and Contra Costa Counties. The EBRPD manages 125,000 acres of park areas, including 73 regional parks, recreation areas, wilderness, shorelines, preserves, and land bank areas.[2] The EBRPD Master Plan 2013 was adopted on July 16, 2013, and aims to preserve a rich heritage of natural and cultural resources and provide open space, parks, trails, safe and healthful recreation, and environmental education.[3] High priority issues identified in the Master Plan include affirming the role and identity of the regional parks; responding to changes in demographics; providing a variety of "trails for all"; leading the movement for Healthy Parks Healthy People; supporting the shift to green communities; creating

[1] California Legislative Information, 2015, AB-1191 Quimby Act: fees, accessed October 12, 2022, https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1191.

[2] East Bay Regional Park District, 2022, About Us, accessed October 11, 2022, https://www.ebparks.org/about.

[3] East Bay Regional Park District, July 16, 2013, *Master Plan 2013*, accessed October 12, 2022, https://www.ebparks.org/sites/default/files/master_plan_2013_final.pdf.

conversation and management standards for cultural and historic resources; and balancing funding priorities, meeting expectations, and sound fiscal practices.

Local Regulations

Oakland General Plan

Chapter 4, *Recreation*, of the Oakland General Plan Opens Space, Conservation, and Recreation Element addresses parks and recreational facility as well as the delivery of recreation services to the residents of Oakland. Policies related to parks are outlined in Table 4.14-1, *Oakland General Plan Policies Relevant to Recreation and the Proposed Project*.

TABLE 4.14-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO RECREATION AND THE PROPOSED PROJECT

Policy No.	Text
Open Space, Conservation, and Recreation Element	
REC-4.1	**Systematic Maintenance Provisions.** Provide for ongoing, systematic maintenance of all parks and recreational facilities to prevent deterioration, ensure public safety and permit continued public use and enjoyment.
REC-10.2	**Parkland Dedication and Impact Fee.** To the extent permitted by law, require recreational needs created by future growth to be offset by resources contributed by that growth. In other words, require mandatory land dedication for large scale residential development and establish a park impact fee for smaller-scale residential development, including individual new dwelling units. Calculate the dedication or fee requirement based on a standard of four acres of local-serving parkland per 1,000 residents.
REC 10.4	**Private Sector Provision of Public Services.** Promote and support partnerships with the nonprofit and private sectors in the development and operation of facilities which serve a public recreational need. Where financially feasible, consider joint financing and operating agreements for recreational facilities with other public and private agencies.

Source: City of Oakland, June 1996, *City of Oakland General Plan*, *Open Space, Conservation, and Recreation (OSCAR) Element*.

Oakland Municipal Code

The OMC includes various directives related to recreation in Oakland. Chapter 15.74, *Transportation and Capital Improvement Impact Fees*, requires residential projects to pay a fee per housing unit to ensure that development projects pay their fair share to compensate for the increased demand for transportation and capital improvements infrastructure generated by such development projects. Section 15.74.110, *Capital Improvements Impact Fee Fund*, establishes funds that are to be used to pay for projects that are required for fire, police, library, parks and recreation, or storm drain services. As outlined in Section 15.74.050, *Amount of impact fees*, the impact fee for residential projects is calculated by multiplying the fee per housing unit by the number of additional housing units to be constructed. For residential projects, the impact fee amount shall be based upon the impact fee zone in which the development project is located as contained within the Master Fee Schedule and as set forth in the maps included in Section 15.74.150, *Impact fees zone maps*, of this chapter. Payment of the impact fees shall be due in one installment prior to the issuance of a building permit for all or any portion of the development project associated with the building permit and shall be in the amount of 100 percent of the impact fee.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCA) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCA is related to recreation and is applicable to the proposed project:

- SCA-73. Capital Improvements Impact Fee: The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (OMC Chapter 15.74).
- SCA-74. Access to Parks and Open Space: The project applicant shall submit a plan for City review and approval to enhance bicycle and pedestrian access from the project site and adjacent areas to Leona Canyon Regional Open Space Preserve. Examples of enhancements may include, but are not limited to, new or improved bikeways, bike parking, traffic control devices, sidewalks, pathways, bulb-outs, and signage. The project sponsor shall install the approved enhancements during construction and prior to completion of the project.

Oakland Measure Q

Oakland voters passed Measure Q in March 2020. Measure Q collects parcel tax funding to support City services, and 64 percent of the funding goes to maintaining, protecting, and improving parks, open space, and recreational facilities and services throughout the city. In the 2021-2022 Fiscal Year, $27.5 million in revenue and $17.6 million for parks and recreation was collected.

4.14.1.2 EXISTING CONDITIONS

The City of Oakland Department of Parks and Recreation manages 20 recreation centers and 35 athletic fields and facilities and offers many recreational opportunities for residents of all ages.[4] Boating, health/fitness, performing arts, sports, and visual arts/technology activities are available to both youth and adults. The City also offers before- and after-school childcare, enrichment classes, and science and nature activities for the youth, and a homebuyer education workshop for adults. Other recreational opportunities include aquatic programs, sports leagues, camps, and virtual programs.[5]

The project site is in an urban area that is already served by existing parks and recreational facilities. The Leona Canyon Regional Open Space Preserve is 0.2 miles to the east of the project site, and Leona Heights Park is 0.4 miles to the northwest. The Leona Canyon Regional Open Space Preserve is 290 acres and has entrances from a staging area on Campus Drive and from Merritt College.[6] The preserve is ideal for hiking, running, biking, dog walking, and similar activities. Leona Heights Park is a 110-acre park with creeks,

[4] City of Oakland, Find a Sports Field, Recreation Center Park or Facility, accessed October 12, 2022, https://www.oaklandca.gov/services/find-a-parks-and-recreation-location.

[5] City of Oakland, Search the Catalog of Parks and Recreation Activities, accessed October 12, 2022, https://www.oaklandca.gov/services/search-the-catalog-of-parks-and-recreation-activities-programs-and-classes.

[6] East Bay Regional Park District, 2022, Leona Canyon Open Space Regional Preserve, accessed October 11, 2022, https://www.ebparks.org/parks/leona-canyon.

waterfalls, towering redwoods, and coast live oaks, ideal for hiking.[7] The nearest recreational facilities are the Redwood Heights Recreation Center, 1.5 miles northwest of the project site, and the Arroyo Viejo Recreation Center, 1.7 miles southwest of the project site. The Redwood Heights Recreation Center typically offers a wide variety of programming, including cooking classes, karate, tai chi, and yoga.[8] However, as of September 2022, only participants in programs are allowed to be inside the facility, and only karate and yoga programs are being offered. Amenities at the Arroyo Viejo Recreation Center include a sprawling park, an amphitheater, a baseball field, basketball courts, picnic areas, and a community garden.[9]

4.14.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant recreation impact if it would:

1. 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
2. Include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment.
3. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to recreation.

4.14.3 IMPACT DISCUSSION

REC-1	**The proposed project would not 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.**

As discussed in Chapter 4.12, *Population and Housing*, of this Draft EIR, overall growth in the City of Oakland will continue to increase through 2040, and the proposed project would result in a net increase of ten detached single-family dwelling units and approximately 24 residents. Although the project site is currently undeveloped, the surrounding areas are already developed with residential neighborhoods and serviced by existing parks and recreational facilities. The project site is walking distance to an entrance to Leona Canyon Regional Open Space Preserve and Leona Heights Park. The Redwood Heights Recreation Center and the Arroyo Viejo Recreation Center are 1.5 miles and 1.7 miles from the project site, respectively. Residents of the proposed development may also travel to nearby parks or recreational

[7] Oakland Parks and Recreation Foundation, 2022, Leona Heights Park, accessed October 11, 2022, https://www.oaklandparks.org/leona-heights-park/.

[8] City of Oakland, September 2022, Redwood Heights Recreation Center, accessed October 12, 2022, https://www.oaklandca.gov/topics/redwood-heights-recreation-center.

[9] City of Oakland, Arroyo Viejo Recreation Center, accessed October 12, 2022, https://www.oaklandca.gov/topics/arroyo-viejo-recreation-center.

facilities throughout Oakland and the region. The proposed project would include recreational facilities at the northern edge of the project site, where Viewcrest Lane meets Campus Drive. This area will include seating and open space opportunities for residents and relieve potential pressure on nearby parks and recreational facilities.

The proposed project would also include the payment of capital improvement impact fees, pursuant to SCA-73, *Capital Improvements Impact Fees,* and OMC Chapter 15.74. The impact fees ensure that development projects pay their fair share to compensate for the increased demand for capital improvements infrastructure generated by such projects. Furthermore, the proposed project would comply with SCA-74, *Access to Parks and Open Space*, and would be required to submit plans to the City to enhance bicycle and pedestrian access from the project site and adjacent areas to Leona Canyon Regional Open Space Preserve.

Due to its size and nature—a residential development with 24 projected occupants—the proposed project would not result in the occurrence or acceleration of substantial physical deterioration of existing parks and recreational facilities. The proposed project includes recreational facilities to relieve pressure on nearby parks and recreational facilities. Additionally, the proposed project would be required to pay capital improvement impact fees to offset its fair share of capital improvements impacts and submit plans to enhance bicycle and pedestrian access near the project site. Therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

REC-2	**The proposed project would include recreational facilities and would not require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment.**

As described under Impact Discussion REC-1, the proposed project would include recreational facilities at the northern edge of the project site, within the 2.6-acre development area, where Viewcrest Lane meets Campus Drive. This area will include seating and open space opportunities for residents and relieve potential pressure on nearby parks and recreational facilities. Therefore, the proposed project would not require construction or expansion of public recreational facilities that might have a substantial adverse physical effect on the environment, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

REC-3	**The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to recreation.**

The cumulative setting for recreation takes into account growth resulting from the proposed project in combination with additional projects, including cumulative growth associated with City-approved projects and other foreseeable future projects. Overall growth in Oakland will continue to increase through 2040, which would require increased resources for parks and recreational facilities. However, new development

in the city would be required to comply with Oakland SCAs. Project applicants would have to pay capital improvements impact fees and submit plans to the City to enhance bicycle and pedestrian access from their project site. This would ensure that any recreation impacts—increased demand for capital improvements infrastructure generated by such projects—would be offset. Therefore, cumulative impacts of the proposed project and future projects on recreation would be *less than significant*.

Significance without Mitigation: Less than significant.

4.15 TRANSPORTATION

This chapter includes an evaluation of the potential environmental consequences related to transportation from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing transportation in the vicinity of the proposed project.

This chapter is based on the following technical documents that are available in Appendix I, *Transportation Impact Analysis*, of this Draft Environmental Impact Report (EIR):

- *Viewcrest Estates Residential Development CEQA Evaluation*, prepared by W-Trans, dated July 2023.
- *Evacuation Time Estimate Effect Analysis*, prepared by Fehr & Peers, dated March 7, 2023.

4.15.1 ENVIRONMENTAL SETTING

4.15.1.1 REGULATORY FRAMEWORK

Federal Regulations

Americans with Disabilities Act

The Americans with Disabilities Act of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the Act is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the United States Access Board, an independent federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights of way. While these guidelines have not been formally adopted, they have been widely followed by jurisdictions and agencies nationwide in the last decade. These guidelines, last revised in July 2011, address various issues, including roadway design practices, slope and terrain issues, and pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, public transit, and other components of public rights of way.

State Regulations

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law. The Legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled and thereby contribute to the reduction of greenhouse gas emissions, as required by the California Global Warming Solutions Act of 2006 (AB 32). Additionally, AB 1358 requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users. To further its commitment to the goals of SB 375, AB 32, AB 1358, and SB 743, the State added Chapter 2.7, *Modernization of Transportation Analysis for Transit-Oriented Infill Projects*, to Division 13 (Section 21099) of the Public Resources Code.

Title 24

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The CBC is based on the International Building Code but has been modified for California conditions. The CBC provides fire and emergency equipment access standards for public roadways in Part 9, Appendix D. These standards include specific width, grading, design, and other specifications for roads, which provide access for fire apparatuses; the CBC also indicates which areas are subject to requirements for such access.

The CBC also incorporates by reference the standards of the International Fire Code. The California Fire Code (CFC) contains provisions related to emergency vehicle access, including requirements for roadway design, fire hydrants, and other relevant design features. CFC Section 4903.1 authorizes the fire code official to require a fire protection plan, prepared to determine the acceptability of fire protection and life safety measures designed to mitigate wildfire hazards presented. The fire protection plan shall address fire department access, egress, and road and address signage, among other topics.

Regional Regulations

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the nine-county Bay Area, including Alameda County. It also functions as the federally mandated metropolitan planning organization for the region. It is responsible for regularly updating the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities.

As previously stated, the passage of AB 32, the State of California committed itself to reducing statewide greenhouse gas emissions. Subsequent to adoption of AB 32, the State adopted SB 375 as the means for achieving regional transportation related greenhouse gas targets. Among the requirements of SB 375 is the creation of a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. The SCS and the RTP must be consistent with one other, including action items and financing decisions. Metropolitan planning organizations must use transportation and air emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission.

The MTC and Association of Bay Area Governments' *Plan Bay Area 2050* is the Bay Area's RTP/SCS. *Plan Bay Area 2050* was prepared by MTC in partnership with Association of Bay Area Governments, the Bay Area Air Quality Management District, and the San Francisco Bay Conservation and Development Commission and adopted on October 21, 2021.[1] The SCS sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by California Air Resources Board. An overarching goal of *Plan Bay Area*

[1] Association of Bay Area Governments and the Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed October 14, 2022.

2050 is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle miles traveled and associated greenhouse gas emissions reductions. The proposed project, while within 0.4 miles of the nearest bus stop at Merritt College, is not within an identified Priority Development Area[2] or Transit Priority Area.[3]

Local Regulations

Oakland General Plan

The Land Use and Transportation Element of the General Plan contains policies and implementation programs for land use in the City, categorized by industry and commerce, transportation and transit-oriented development, neighborhoods, waterfront, and downtown. The Oakland General Plan Safety Element is composed of seven chapters: 1) Introduction, 2) Public Safety, 3) Geologic Hazards, 4) Fire Hazards, 5) Hazardous Materials, 6) Flooding, and 7) Hazards by Area. Chapter 4, *Fire Hazards*, analyzes the City's roadway standards and emergency evacuation routes. Policies applicable to the proposed project related to transportation are outlined in Table 4.15-1*, Oakland General Plan Policies Relevant to Transportation and the Proposed Project*.

TABLE 4.15-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND THE PROPOSED PROJECT

Land Use and Transportation Element	
T3.5	**Including Bikeways and Pedestrian Walks.** The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, whenever possible.
N7.4	**Designing Local Streets.** Local streets should be designed to create an intimate neighborhood environment and not support high speed nor large volumes of traffic. Providing on-site parking for cars and bicycles, planting, and maintaining streets, bike routes, and sidewalks, and orienting residential buildings toward the street all contribute to the desired environment.
Safety Element	
FI-2	Continue, enhance or implement programs that seek to reduce the risk of structural fires.

Source: City of Oakland, March 1998, *City of Oakland General Plan*, *Land Use and Transportation Element*.

Oakland Municipal Code

The OMC includes various directives related to transportation in Oakland. Chapter 12.02, *Complete Street Design Standards*, establishes the City's intent to implement complete streets serving all users and modes so as to uniformly regulate the design, construction, operation, and maintenance of the street system. All roadway dimensions and geometric requirements, including but not limited to, right-of-way widths, pavement widths, alignment, grade, length of block and others are established in the context of the complete streets approach in compliance with Chapter 16.16, *Design standards*.

[2] Metropolitan Transportation Commission, updated July 2020, Priority Development Areas (Plan Bay Area 2050), https://opendata.mtc.ca.gov/datasets/priority-development-areas-plan-bay-area-2050, accessed October 24, 2022.

[3] Metropolitan Transportation Commission, updated August 2021, Transit Priority Areas (2021), https://www.arcgis.com/apps/mapviewer/index.html?layers=370de9dc4d65402d992a769bf6ac8ef5, accessed October 14, 2022.

OMC Chapter 15.12, *Oakland Fire Code*, adopts the 2019 CFC with modifications set forth in the chapter. Aside from fire regulations, the code establishes regulations affecting or relating to structures, processes, premises, and safeguards regarding conditions hazardous to life, property, or public welfare in the occupancy of structures or premises, and conditions affecting the safety of emergency responders during emergency operations.

Chapter 15.74, *Transportation and Capital Improvement Impact Fees*, of the OMC requires residential projects to pay a fee per housing unit to ensure that development projects pay their fair share to compensate for the increased demand for transportation and capital improvements infrastructure generated by such projects. Section 15.74.100, *Transportation impact fee fund*, establishes funds that are to be used to pay for improvements within the public right-of-way for pedestrians, bicyclists, and/or motor vehicles. As outlined in Section 15.74.050, *Amount of impact fees*, the impact fee for residential projects is calculated by multiplying the fee per housing unit but the number of additional housing units to be constructed. For residential projects, the impact fee amount shall be based upon the impact fee zone in which the development project is located as contained within the Master Fee Schedule and as set forth in the maps included in Section 15.74.150, *Impact fees zone maps*, of this chapter. Payment of the impact fees shall be due in one installment prior to the issuance of a building permit for all or any portion of the development project associated with the building permit and shall be in the amount of 100 percent of the impact fee.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCAs are related to transportation and are applicable to the proposed project:

- SCA-75. Construction Activity in the Public Right-of-Way:
  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, sidewalks, bicycle facilities, and bus stops.
  b) Traffic Control Plan Required: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved Plan during construction.
  c) Repair of City Streets: 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.

Transportation Impact Review Guidelines

The City's Transportation Impact Review Guidelines (TIRG), released April 2017, provide direction on the scope of study that the City of Oakland requires in evaluating the potential transportation impact of proposed land use development projects.[4] The transportation review is to analyze the multimodal trips generated by the project and how motor vehicle traffic generated by the project is distributed through the transportation network. The TIRG-based trip generation analysis should consider all modes of travel and include reductions in motor vehicle trip generation based on specific factors and supporting evidence. Two-hour peak period transportation counts of vehicles, pedestrians, and bicyclists are required for all study intersections during all study periods agreed upon during the scoping process. Typical analysis should include both weekday morning (7:00 a.m. to 9:00 a.m.) and evening (4:00 p.m. to 6:00 p.m.) peak periods. Through site analysis, the project consultant is to establish the transportation needs of the project in the immediate vicinity of the project site.

City of Oakland Department of Transportation Strategic Plan

In October 2016, the City of Oakland released the Strategic Plan emphasizing managing streets and sidewalks.[5] The Strategic Plan provides an achievable, data-driven and trackable summary of the City's commitments, which can be used to mark progress toward goals. These reliable measurements can then guide the development of future planning for the streets of Oakland. Goals of the Strategic Plan include equitable jobs and housing, holistic community safety, vibrant sustainable infrastructure, and responsive trustworthy government.

2019 Oakland Bike Plan

The Oakland Bike Plan was first adopted in 1999 and comprehensively updated in July 2019.[6] The Bike Plan's vision is to make Oakland a bicycle-friendly city where bicycling provides affordable, safe, and healthy mobility for all residents. New projects and programs will work to enhance existing communities and their mobility needs. The Bike Plan defines future actions and way to measure progress on its four goals: access, health and safety, affordability, and collaboration.

[4] City of Oakland, April 14, 2017, *Transportation Impact Review Guidelines: Land Use Development Projects*, https://cao-94612.s3.amazonaws.com/documents/oak063581_2022-07-14-214248_nvyg.pdf, accessed October 14, 2022.

[5] City of Oakland, Department of Transportation, October 2016, Strategic Plan, https://oaklandca.s3.us-west-1.amazonaws.com/oakca1/groups/pwa/documents/report/oak060949.pdf, accessed October 14, 2022.

[6] City of Oakland, Department of Transportation, July 2019, *2019 Oakland Bike Plan*, https://cao-94612.s3.amazonaws.com/documents/LBOakland_FinalDraft_20190807_web.pdf, accessed October 14, 2022.

2017 Pedestrian Plan

The City of Oakland adopted the Oakland Walks! Pedestrian Plan (Pedestrian Plan) in 2017.[7] The vision of the Pedestrian Plan is to make Oakland a "walker's paradise" with vibrant, safe, and attractive streets that give everyone the opportunity for convenient and healthy walks to places. The Pedestrian Plan outlines an action plan to invest in and improve safety in the High Injury Network and to implement the key policy and programmatic improvements that will make streets safer and more inviting for walking throughout the city. The Pedestrian Plan intends to help make areas that have few services, or may need additional everyday services, accessible to local communities.

Oakland Emergency Operations Plan

The City has developed an all-hazards Emergency Operations Plan (EOP) to ensure that the necessary and appropriate actions are taken to protect Oakland residents and visitors and their property from any threat or hazard.[8] The EOP provides for the effective mobilization of all of City resources to meet any condition constituting a local emergency, state of emergency, or state of war emergency. It provides for the organization, powers and duties, services, and staff of the City's emergency organization and describes how the City will prepare for, prevent, respond to, recover from and mitigate the effects of all types of hazard and threats. There are three parts to the City of Oakland EOP:

- Base Plan. Describes fundamental systems, strategies, policies, assumptions, responsibilities, and operational priorities that the City will follow to guide and support emergency management efforts.
- Emergency Support Functions. Establishes 17 emergency support functions that describe discipline-specific emergency goals, objectives, capabilities, and responsibilities. These emergency support functions include references to City agency/department plans and procedures.
- Incident Annexes. Highlights unique planning assumptions, policies, procedures, and emergency preparedness, response, and recovery actions specific to a particular hazard or threat. These include earthquake, severe weather, wildland fire, tsunami, terrorism, and civil unrest. The Wildland Fire Annex contains specific measures for conducting evacuations in the event of a wildfire.

4.15.1.2 EXISTING CONDITIONS

Regional Access

Regional vehicular access to the project site is provided by Interstate 580 (I-580) and State Route 13 (SR-13). I-580 is an eight-lane freeway between I-80 (near the Bay Bridge) and the Tri-Valley area and beyond to the east. I-580 is west of the project site. SR-13 is a four-lane freeway between I-580 and SR-24.

[7] City of Oakland, Department of Transportation, 2017, Oakland Walks! 2017 Pedestrian Plan Update, https://cao-94612.s3.amazonaws.com/documents/Ped-Plan-2017-rev-sep2018-compressed.pdf, accessed October 14, 2022.

[8] City of Oakland, October 2021, *Emergency Operations Plan*, https://cao-94612.s3.amazonaws.com/documents/EOP-v4-Council-DRAFT_20211112.pdf, accessed October 18, 2022.

Local Access

The project site is accessible via the following roadways:

- Redwood Road is a four-lane minor arterial extending between the 35th Avenue and Skyline Boulevard in the Oakland Hills. In the study area Redwood Road exists on hilly terrain and consists of four lanes (two lanes in each direction divided by a raised median) with a posted speed limit of 35 mph. On-street parking is prohibited on Redwood Road in the vicinity of Campus Drive.
- Campus Drive is a two-lane major collector providing access between Redwood Road and Keller Avenue. Adjacent land uses along Campus Drive are mostly single-family homes. Merritt Community College is at 12500 Campus Drive. The posted speed limit of Campus Drive is 30 mph. On-street parking along Campus Drive near the project site is prohibited on weekdays from 8:00 a.m. to 5:00 p.m.
- Keller Avenue is a four-lane minor arterial which provides access between I-580 and Skyline Boulevard. Keller Avenue has both vertical and horizontal curves conforming with the terrain of the Oakland Hills. The travel directions on Keller Avenue are separated by a raised median. The posted speed limit is 35 mph.

The following intersections provide access to the project site via Campus Drive:

- Campus Drive/Redwood Road is a signalized intersection with permissive left-turn phasing on the northbound and southbound approaches and permissive phasing on the eastbound and westbound approaches. Crosswalks are provided on the south and east legs only.
- Campus Drive/Viewcrest Drive is an unsignalized, two-way stop-controlled, tee intersection, with eastbound Viewcrest Drive terminating in a stop-controlled approach. There are sidewalks on both sides of every approach.
- Campus Drive/Keller Avenue is an unsignalized, two-way stop-controlled, tee intersection, with Campus Drive terminating in a stop-controlled approach. There are sidewalks on both sides of every approach. A full access driveway serving the Ridgemont Plaza Shopping Center is located along the south side of this intersection opposite Campus Drive.

Transit Facilities

Bay Area Rapid Transit

The Bay Area Rapid Transit (BART) system provides regional rail service between San Mateo, San Francisco, Alameda, Contra Costa and Santa Clara counties, with eight stations in Oakland. The nearest station is in the Fruitvale District, which is approximately four miles from the project site. This station is served by the Richmond-Berryessa, Daly City-Dublin/Pleasanton, and Daly City-Berryessa Lines. On weekdays during peak commute periods, trains have 15-minute headways. During all other times (off-peak periods and weekends) trains operate at 20-minute headways. Typical hours of operation for BART are between 5:00 a.m. and midnight on weekdays, 6:00 a.m. to midnight on Saturdays, and 8:00 a.m. to midnight on Sundays.

Alameda-Contra Costa Transit District

Alameda-Contra Costa County Transit (AC Transit) provides fixed-route bus service throughout the East Bay. There are numerous bus routes that run along major streets in Oakland, connecting to adjacent cities such as Berkeley, Alameda, San Leandro, and Emeryville. The project area is served by a single bus route, Route 54, which operates between the BART Fruitvale Station and Merritt College via Redwood Road. The nearest bus stop is approximately 2,200 feet north of the proposed project site at the main entrance to Merritt College. Route 54 operates between 6:00 a.m. and 10:00 p.m. on weekdays with approximately 40-minute headways. On weekends, Route 54 operates from 7:30 a.m. to 7:30 p.m. with 30-minute headways. Two bicycles can be carried on most AC Transit buses. Bike-rack space is on a first-come, first-served basis. Additional bicycles are allowed on AC Transit buses at the discretion of the driver.

East Bay Paratransit

Paratransit is an on-demand service for persons with disabilities who cannot independently use regular fixed-route transit services. AC Transit and BART provide paratransit service in Oakland through the East Bay Paratransit service.

Bicycle Facilities

The Caltrans 2017 Highway Design Manual classifies bikeways into four categories:

- Class I Multi-Use Path: a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- Class II Bike Lane: a striped and signed lane for one-way bike travel on a street or highway.
- Class III Bike Route: signing only for shared use with motor vehicles within the same travel lane on a street.
- Class IV Bikeway: also known as a separated bikeway, for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

Bicyclists ride in the roadway and/or on sidewalks along the streets in the project area. Future bicycle improvements in the vicinity of the proposed project include a Class II bike lane on Campus Drive between Redwood Road and Merritt College and on Redwood Road from Campus Drive to Macarthur Boulevard.[9]

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, a network of sidewalks, and curb ramps provide access for pedestrians in the vicinity of the proposed project site; however, sidewalk gaps can be found along the west side of Campus Drive in the area directly adjacent to the Merritt College

[9] City of Oakland, Department of Transportation, July 2019, *2019 Oakland Bike Plan*, https://cao-94612.s3.amazonaws.com/documents/LBOakland_FinalDraft_20190807_web.pdf, accessed October 14, 2022.

parking lots. Existing gaps along this roadway affect convenient and continuous access for pedestrians and lead to potential conflict points. Sidewalks along Campus Drive vary from about four to five feet wide. The nearest marked crosswalk along Campus Drive is at the Merritt College entrance, approximately 1,800 feet west of the proposed project. Lighting is provided by overhead streetlights along Campus Drive.

4.15.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's *2020 CEQA Thresholds of Significance Guidelines*, the proposed project would result in a significant transportation impact if it would:

1. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle and pedestrian facilities (except for automobile level of service or other measures of vehicle delay).
2. Cause substantial additional vehicle miles traveled (per capita, per service population, or other appropriate efficiency measure).
3. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas or by adding new roadways to the network.
4. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to transportation.

4.15.3 IMPACT DISCUSSION

TRAN-1	**The proposed project would not conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, and bicycle and pedestrian facilities (except for automobile level of service or other measures of vehicle delay).**

Sight Distance

Sight distances at the private road access to Campus Drive were evaluated based on criteria in the *Highway Design Manual* published by Caltrans. According to a survey of vehicle speeds conducted by W-Trans on December 13, 2019, this portion of Campus Drive had an observed 85th percentile speed of 39.4 miles per hour (mph) in the northbound direction and 39.6 mph in the southbound direction.[10] Using a design speed of 40 mph, the recommended stopping sight distance is 300 feet. Based on a review of field conditions, adequate sight distance would be available at the proposed private road to accommodate all turns leaving the site. Accordingly, the construction and operation of the proposed project would not conflict with roadway design standards to ensure safe ingress/egress.

[10] W-Trans, July 2023, *Viewcrest Estates Residential Development CEQA Evaluation*.

Evacuation

The proposed project is anticipated to generate a relatively nominal number of new vehicle trips on the roadway network (see Impact Discussion TRAN-2). The relative change to roadway operations attributable to the proposed project is also expected to be nominal. As stated, the proposed project's driveway would be located with direct access to Campus Drive, a major collector road, and would likely not rely on any local roads to efficiently transport residents out of the area during an emergency. Major collector roads such as Campus Drive can serve relatively high traffic volumes and therefore should be able to accommodate the relatively low number of new vehicle trips added by the proposed project during an emergency. The location of the project (at Campus Drive) allows for immediate ingress/egress to minimize increased evacuation time or emergency access response times.

There are two evacuation routes for the proposed project, Campus Drive to Redwood Road, and Campus Drive to Keller Avenue. Campus Drive to Redwood Road (toward Merritt College) is a two- and four-lane roadway with sidewalks on both sides and some medians. Campus Drive to Keller Avenue is a two-lane road with sidewalks on both sides. Campus Drive is gradually sloped and does not contain sharp or narrow turns. The adopted City of Oakland EOP is the only emergency response plan for Oakland and is described under Section 4.15.1.1, *Regulatory Framework*. The Wildland Fire Annex of the City of Oakland's EOP has specific measures for conducting evacuations in the event of a wildfire, which is the most likely evacuation scenario given the project location. As discussed in Chapter 4.17, *Wildfire*, of this Draft EIR, the proposed project's roadway width of 34 feet and cul-de-sac diameter of 70 feet have been designed to satisfy the minimum City requirements, as described in City of Oakland Public Works standards and OMC Chapter 15.12. The proposed project's driveway and internal roadway would be designed to current City standards and so can be expected to accommodate the access requirements for both emergency and passenger vehicles.

Based on the anticipated existing plus project morning (AM) and evening (PM) peak hour volumes, a dedicated left-turn lane is not warranted for either the AM or PM peak hour at the new intersection on Campus Drive that would be created by the proposed project's new street. Furthermore, the *Evacuation Time Estimate Effect Analysis* prepared for the proposed project evaluated the increase in evacuation time the proposed project would add in the event all residential and nonresidential land on Campus Drive would need to evacuate simultaneously (see Appendix I, *Transportation Impact Analysis*, of this Draft EIR).[11] This analysis assumed a baseline evacuation value of about 2,200 vehicles, that evacuating vehicles would go through the intersections of Campus Drive/Redwood Road and Campus Drive/Keller Avenue, and that the proposed project would add about 20 vehicles to the overall evacuating vehicles along Campus Drive. The analysis concludes that the "no project evacuation scenario" would be 62 minutes northbound to Redwood Road and 57.5 minutes southbound to Keller Avenue. The "plus project evacuation scenario" would result in a 1.5-minute increase in evacuation time (63.5 minutes) northbound to Redwood Road and 0.4-minute increase in evacuation time (57.9 minutes) southbound to Keller Avenue. The traffic signal cycle length at the intersection of Campus Drive/Redwood Road is about 100 seconds, and therefore the 1.5-minute increase would be less than one traffic signal cycle at the

[11] The wildfire evacuation findings were developed and approved in coordination with the Oakland Fire Department, Planning Bureau, and City Attorney's Office.

intersection. Additionally, as described in Chapter 3, *Project Description,* of this Draft EIR, the proposed project would require the development and approval of a fire protection plan pursuant to CFC Section 4903.1, and National Oceanic and Atmospheric Administration (NOAA) All Hazards Weather Radios would be given to each new homeowner when they move in. The NOAA All Hazards Weather Radios operate on a nationwide network of radio stations broadcasting weather information 24 hours a day direct from nearby National Weather Service offices. The NOAA All Hazards Weather Radios are the fastest way to receive warnings of severe weather, including wildfire. The future HOA would also provide each resident with an HOA packet with current information about evacuation preparedness and methods and require residents to download the AC Alert emergency notification system and sign up for the ZoneHaven Aware application. These services are intended to enhance communications between emergency response staff and residents so that potential evacuation routes are clearly identified during an emergency. The future HOA would hold annual wildfire and evacuation training for all residences in the proposed development. Accordingly, the construction and operation of the proposed project would not obstruct the implementation of the EOP.

Pedestrian Facilities

Internal pedestrian access within the site would be provided via a network of sidewalks and curb ramps directly connected to the existing sidewalk on Campus Drive. All internal pedestrian facilities would be built to satisfy City of Oakland standards. Accordingly, existing and proposed pedestrian facilities serving the project site would be adequate.

Bicycle Facilities

The project does not propose to modify or construct new bicycle facilities within the study area. It is anticipated that bicyclists would use the paved vehicular roadway within the project site to access Campus Drive. Accordingly, the existing bicycle facilities serving the project site would be adequate to serve any incremental increase in bicycle activity attributable to the proposed project.

Transit

The topography and lack of continuous sidewalks on Campus Drive are expected to hinder pedestrian access to transit. However, if some residents chose to use transit instead of a private passenger car, it is expected that the project may incrementally increase the use of bus transit. However, the project would not conflict with or decrease the performance of the existing transit system. Accordingly, transit facilities serving the project site are adequate to serve any incremental increase in users attributable to the proposed project.

Construction

During construction, vehicles, equipment, and materials would be staged and stored on a centrally located portion of the project site when practical. No long-term staging of equipment would occur around the perimeter of the site adjacent to existing residential uses. No staging would occur in the public right-of-way. The construction site and staging areas would be clearly marked, and construction fencing would be installed to prevent disturbance and safety hazards. A combination of on- and off-site parking facilities for

construction workers would be identified during demolition, grading, and construction. The proposed project would be required to obtain an obstruction permit and submit a traffic control plan pursuant to SCA-75. These documents would include traffic control measures so that auto, transit, bicycle, and pedestrian users may safely circumnavigate the construction area. The proposed development is set back from the public right-of-way and would not result in a significant effect on the circulation system.

In summary, for the reasons discussed in this section, the proposed project would not conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

TRAN-2 The proposed project would not cause substantial additional vehicle miles traveled (per capita, per service population, or other appropriate efficiency measure).

Based on the City's TIRG, a project generating less than 100 vehicle tripes per day is considered a small project and is generally assumed to cause a less-than-significant transportation impact.[12] The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers' *Trip Generation Manual* (11th ed.). The proposed project is expected to generate an average of 94 net-new trips per day, including seven trips during the AM peak hour and ten during the PM peak hour.[13] Therefore, the proposed project is considered a small project, and impacts related to vehicle miles traveled would be *less than significant*.

Significance without Mitigation: Less than significant.

TRAN-3 The proposed project would not substantially induce additional automobile travel by increasing physical roadway capacity in congested areas or by adding new roadways to the network.

The proposed project would include a new residential street (Viewcrest Lane) for the 24 projected residents (see Chapter 4.12, *Population and Housing*, of this Draft EIR). However, Viewcrest Lane would be a cul-de-sac and would mainly be used by residents and their visitors to access the proposed homes. The proposed project would not alter the existing roadways serving the site by increasing physical capacity for additional vehicles. Therefore, the proposed project would have a *less-than-significant* transportation impact on roadway capacities.

Significance without Mitigation: Less than significant.

[12] City of Oakland, April 14, 2017, *Transportation Impact Review Guidelines: Land Use Development Projects*, https://cao-94612.s3.amazonaws.com/documents/oak063581_2022-07-14-214248_nvyg.pdf, accessed October 14, 2022.

[13] W-Trans, July 2023, *Viewcrest Estates Residential Development CEQA Evaluation*.

TRAN-4	The proposed project would not, in combination with past, present and reasonably foreseeable projects, result in significant cumulative impacts with respect to transportation.

The cumulative setting for transportation applies the regional transportation demand model and incorporates regional growth projections to the transportation network in Alameda County and the proposed project. Because the proposed project is anticipated to generate an average of 94 net-new daily trips and would not increase roadway congestion, it would not considerably contribute to the regional growth projection to the transportation network in Alameda County. Therefore, the proposed product would not be cumulatively considerable, and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.16 UTILITIES AND SERVICE SYSTEMS

This chapter includes an evaluation of the potential environmental consequences related to utilities and service systems from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing utilities and service systems in the vicinity of the proposed project. The utilities and service systems analyzed in this chapter include wastewater, water, and solid waste. Stormwater as it relates to both water quality and capacity is addressed in Chapter 4.9, *Hydrology and Water Quality*, of this Draft Environmental Impact Report (EIR). Impacts associated with energy use and conservation are discussed in Chapter 4.5, *Energy*, of this Draft EIR. Consistency with the Oakland Energy and Climate Action Plan is analyzed in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR.

4.16.1 WASTEWATER

4.16.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Clean Water Act

The Clean Water Act (CWA) regulates the discharge of pollutants into watersheds throughout the nation. The CWA consists of two parts, one being the provisions that authorize federal financial assistance for municipal wastewater treatment plant construction. The other part is the regulatory requirements that apply to industrial and municipal dischargers. Under the CWA, the United States Environmental Protection Agency (USEPA) implements pollution-control programs and sets wastewater standards.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a wastewater treatment plant.

State Regulations

State Water Resources Control Board General Waste Discharge Requirements

On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted a General Waste Discharge Requirement (Order No. 2006-0003 and amended by Order No. WQ 2013-0058-EXEC) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system. The amendment establishes monitoring, record keeping, reporting, and notification requirements for Order No. 2006-0003.

The SWRCB has delegated authority to nine Regional Water Quality Control Boards (RWQCBs) to enforce these requirements within their region. Oakland is within the jurisdiction of the San Francisco Bay RWQCB (Region 2). The San Francisco Bay RWQCB issues and enforces NPDES permits within its jurisdiction. NPDES permits allow the RWQCB to regulate where and how waste is disposed, including the discharge volume and effluent limits of waste, and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

Sanitary District Act of 1923

The Sanitary District Act of 1923 (Health and Safety Code Section 6400 et seq.) authorizes the formation of sanitation districts and enforces the districts to construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater. This act was amended in 1949 to allow the districts to also provide solid waste management and disposal services, including refuse transfer and resource recovery.

Regional Regulations

East Bay Municipal Utility District NPDES Permit

Operation of East Bay Municipal Utility District's (EBMUD) main wastewater treatment plant (WWTP) and interceptor conveyance system is regulated by Waste Discharge Requirements (NPDES No. CA0037702), which is under revision as Tentative Order R2-2020-00XX. EBMUD must file a Report of Waste Discharge as an application for the updated waste discharge requirements and an application for reissuance of the NPDES permit no later than February 1, 2025. The NPDES permit enables the WWTP to discharge treated wastewater into the central San Francisco Bay.

East Bay Municipal Utility District Wastewater Control Ordinance

EBMUD's Wastewater Control Ordinance regulates wastewater discharges into the wastewater system and includes discharge limits (local limits) for select pollutants. The ordinance establishes regulations and charges for the collection, treatment, and disposal of wastewater, as well as penalties for violations. The

regulations include provisions for source control to monitor and control quantity, quality, and flow of wastewater and industrial waste.

East Bay Municipal Utility District Sewer System Management Plan

EBMUD's Sewer System Management Plan describes how EBMUD effectively manages operation and maintenance of its sewer collection systems, which include 37 miles of pipeline, 15 pump stations, and 5 overflow structures. It also includes EBMUD's capital improvement program to reduce and prevent sanitary sewer overflows, and a notification chart for reporting spill events.

Local Regulations

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes directives to minimize adverse impacts to wastewater in Oakland. Chapter 13.02, *Sewer Systems,* regulates the design, construction, operation, and maintenance of the city's sewer system (except building sewers). The Public Works Engineer is responsible for developing, publishing, and enforcing standards for the design, construction, and abandonment of the sewer system. The Director of Public Works is responsible for the operation and maintenance of the public sewer system. Chapter 13.04, *Sewer System Funding,* requires that every user must pay a monthly sewer service charge. The funds are used to maintain, operate, and repair the sewer facilities in the city. OMC Chapter 13.08, *Building Sewers* regulates the size, extent, use, construction, maintenance, and abandonment of building sewers and provides for the administration of such regulations by the Director of Public Works.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCAs are related to wastewater and are applicable to the proposed project:

- SCA-85. Green Building Requirements:
  a) Compliance with Green Building Requirements During Plan-Check: The project shall comply with the requirements of the Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code).
     i. The following information shall be submitted to the City for review and approval with the application for a building permit:
        - Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards.
        - Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.
        - Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.

- Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below.
- Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.
- Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit.
- Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

ii. The set of plans in subsection (a) shall demonstrate compliance with the following:
- CALGreen mandatory measures.
- Minimum of 23 points (3 Community, 6 IAQ/Health, 6 Resources, 8 Water).
- All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted.
- The required green building point minimums in the appropriate credit categories.

b) Compliance with Green Building Requirements During Construction: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. The following information shall be submitted to the City for review and approval:
i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.
ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.
iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

c) Compliance with Green Building Requirements After Construction: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.

- SCA-87. Sanitary Sewer System: 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.

Oakland's Asset Management Implementation Plan and Sewer System Management Plan

The goal of Oakland's Asset Management Implementation Plan and Sanitary Sewer Management Plan is to document, build upon, and strengthen the City's ongoing sewer management program so that the City continues to:[1]

- Manage, operate, and maintain all parts of the collection system;
- Minimize the frequency and impact of Sanitary Sewer Overflows;
- Reduce infiltration and inflow; and
- Comply with all applicable regulations, including the City's NPDES permits and the California General Waste Discharge Requirements for Sanitary Sewer Systems.

Existing Conditions

Wastewater Treatment

EBMUD treats the wastewater from approximately 740,000 people within an 88-square-mile area, treating wastewater from Alameda, Albany, Berkeley, El Cerrito, Emeryville, Kensington, Oakland, Piedmont, and part of Richmond. EBMUD's collection system includes approximately 37 miles of interceptor pipelines, 15 pump stations, and 5 overflow structures.[2] EBMUD's main WWTP is southwest of the Interstate 580/Interstate 80 interchange in Oakland, adjacent to the San Francisco/Oakland Bay Bridge approach. The plant is permitted for a flow rate of 120 million gallons per day (MGD), which is the average dry-weather design flow capacity. However, the facility has a wet-weather capacity of 320 MGD, with primary treatment for 320 MGD and secondary treatment for 168 MGD. Storage basins provide plant capacity for a short-term hydraulic peak of 415 MGD. On average, about 63 million gallons of wastewater is treated every day.[3]

Wastewater Collection

The City of Oakland is responsible for operation and maintenance of the local sanitary sewer collection system within the project site, while EBMUD is responsible for operation and maintenance of interceptor lines and wastewater treatment. The City's sewer collection system includes over 934 miles of pipes ranging in size from 6 inches in diameter to over 66 inches as well as 11 pump stations.[4]

[1] City of Oakland, October 2014, *Asset Management Implementation Plan and Sanitary Sewer Management Plan*, https://cao-94612.s3.amazonaws.com/documents/OAK050527.pdf, accessed October 24, 2022.

[2] East Bay Municipal Utilities District, 2022, Sewers, https://www.ebmud.com/wastewater/collection-treatment/sewers, accessed October 12, 2022.

[3] East Bay Municipal Utilities District, 2022, Wastewater Treatment, https://www.ebmud.com/wastewater/collection-treatment/wastewater-treatment, accessed October 12, 2022.

[4] City of Oakland, Sanitary Sewers, https://www.oaklandca.gov/topics/sanitary-sewers, accessed October 12, 2022.

The City of Oakland uses a numbered basin system that is further subdivided into subbasins. The project site is within subbasin 83D.[5] The City assigns the discharges from each sub\-basin to a single discharge point from the City's collection system to the EBMUD interceptor system. The City allocates each subbasin a certain amount of sewer flow that may be discharged to the EBMUD system, and flows within a subbasin normally may not exceed that allocation. Should a subbasin require more flow than its allocation, allocations may be redirected between adjacent subbasins. In this manner, the City ensures the capacity of the EBMUD wastewater transport and treatment system is adequate to serve development as planned and proposed.

The City has instituted an Inflow and Infiltration Correction Program to reduce wet-weather overflows into the sanitary sewer system. This program is anticipated to increase the capacity of the collection system to allow an approximately 20 percent increase in wastewater flows for each subarea in the city.

4.16.1.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's 2020 CEQA Thresholds of Significance Guidelines, the proposed project would result in a significant wastewater impact if it would:

1. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board.
2. 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.
3. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wastewater.

4.16.1.3 IMPACT DISCUSSION

UTIL-1	**The proposed project would not exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board.**

The residential wastewater from the proposed project would not generate any pollutants that would exceed the effluent limitations of the EBMUD's NPDES permit. The WWTP is permitted to treat 120 MGD under dry-weather conditions and, on average, treats approximately 63 MGD. Therefore, there is currently an excess treatment capacity of 57 MGD, and the addition of wastewater from the proposed project's ten residential units would not result in an exceedance of the WWTP permit conditions. Buildout of the proposed project would not generate wastewater in excess of the treatment requirements of the San Francisco Bay RWQCB's NPDES permit for the main WWTP.

[5] City of Oakland, November 2012, *Sewer System Hydraulic Modeling and Capacity Analysis Report.*

Additionally, the proposed project would be required to comply with EBMUD's Wastewater Control Ordinance that regulates wastewater discharges into the wastewater system and includes discharge limits (local limits) for select pollutants.

With continued compliance with applicable regulations, as described in Section 4.16.1.1, *Environmental Setting*, wastewater generated from the proposed project would not exceed the San Francisco Bay RWQCB's applicable treatment requirements in Tentative Order R2-2020-00XX (NPDES No. CA0037702). Therefore, the wastewater treatment requirements of the NPDES permit issued by the San Francisco Bay RWQCB would not be exceeded, resulting in a *less-than-significant* impact.

Significance without Mitigation: Less than significant.

UTIL-2	**The proposed project would not 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.**

As discussed in Section 4.16.1.1, *Environmental Setting*, EBMUD's Main WWTP is permitted for a dry-weather design flow of 120 MGD. On average, about 63 MGD are treated. Thus, the WWTP has a residual capacity of 57 MGD.

A preliminary estimate of the wastewater generated by the proposed project was calculated using the City's *Sanitary Sewer Design Standard.*[6] This estimate is very conservative because the proposed project would be subject to the latest CALGreen standards, which would result in less water demand and therefore less wastewater generation than the City's 2008 design standards. The average wastewater flow rate for a single-family residential dwelling is 330 gallons per day (gpd) according to the City's guidelines. Therefore, a total of ten homes would generate an average of 3,300 gpd. The peak flow rates could range from 6,600 to 12,375 gpd, using peaking factors of 2.0 to 3.75. The project applicant would be required to prepare a Sanitary Sewer Impact Analysis to determine if the net increase would exceed the growth rate of the sewer subbasin and would be required to pay fees to improve the sanitary sewer infrastructure, if required by the City. The addition of 3,300 gpd up to 12,375 gpd of wastewater would be approximately 0.02 percent of EMBUD's excess treatment capacity at the main WWTP. Therefore, the WWTP would have adequate treatment capacity to accommodate the proposed project.

The proposed project would include the installation of an eight-inch sanitary sewer line in the proposed Viewcrest Lane, which would connect to the eight-inch sanitary sewer line under Campus Drive (see Figure 3-5, *Utilities Plan*, in Chapter 3, *Project Description,* of this Draft EIR). Also, the proposed project would be required to comply with EBMUD's Wastewater Control Ordinance, which regulates discharges

[6] City of Oakland, August 2008, *Sanitary Sewer Design Standards*, https://oaklandca.s3.us-west-1.amazonaws.com/w/OAK036228.pdf, accessed October 24, 2022.

into the wastewater system and includes discharge limits for select pollutants. All sewers would be built in accordance with OMC Chapter 13.08, and SCA-87, *Sanitary Sewer System*. The project applicant would also be required to prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City's Sanitary Sewer Design Guidelines. Compliance with Oakland's SCA, review and approval of the Sewer Impact Analysis report, and the payment of additional fees for sewer infrastructure improvements, if warranted, would ensure that impacts to the City's sewer lines and EBMUD's interceptor conveyance system would be *less than significant*.

Significance without Mitigation: Less than significant.

UTIL-3	**The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wastewater.**

The cumulative impact for wastewater is considered in the context of the growth from the proposed project combined with the estimated growth in EMBUD's main WWTP service area. EBMUD's wastewater service district (known as Special District No. 1 or SD-1) treats domestic, commercial, and industrial wastewater for the cities of Alameda, Albany, Berkeley, Emeryville, Oakland, Piedmont, and the Stege Sanitary District, which includes El Cerrito, Kensington, and parts of Richmond.

The proposed project would contribute to a small increase in the cumulative demand for wastewater. However, the proposed project would generate wastewater that represents less than 0.02 percent of the remaining WWTP capacity. Therefore, the proposed project is not expected to contribute to cumulative impacts associated with wastewater treatment services. Accordingly, cumulative impacts to sanitary wastewater service would be *less than significant*.

Significance without Mitigation: Less than significant.

4.16.2 WATER

4.16.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Federal Safe Drinking Water Act

The Safe Drinking Water Act, the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since then. It authorizes the USEPA to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and human-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California,

the SWRCB conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

America's Water Infrastructure Act of 2018

America's Water Infrastructure Act, signed into law on October 23, 2018, authorizes federal funding for water infrastructure projects; expands water storage capabilities; assists local communities in complying with the Safe Drinking Water Act and CWA; reduces flooding risks for rural, western, and coastal communities; and addresses significant water infrastructure needs in tribal communities.[7] Additionally, America's Water Infrastructure Act requires that drinking water systems that serve more than 3,300 people develop or update risk assessments and emergency response plans. Risk assessments and emergency response plans must be certified by the USEPA within the deadline specified by the act.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.) passed in California in 1969 and was amended in 2013. It is the basic water quality control law for California. Under this act, the SWRCB has authority over state water rights and water quality policy. The act divided the state into nine regional basins, each under the jurisdiction of a RWQCB to oversee water quality on a day-to-day basis at the local and regional levels. RWQCBs engage in various water quality functions in their respective regions and regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The project site is within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

California Urban Water Management Planning Act

Through the Urban Water Management Planning Act of 1983, the California Water Code (Division 6, Part 2.6, Sections 10610 through 10656) requires all urban water suppliers within California to prepare and adopt an urban water management plan and update it every five years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 acre-feet[8] of water annually.[9] The act is intended to support conservation and efficient use of urban water supplies. It requires that total project water use be compared to water supply sources over the next 20 years in five-year increments, that planning occur for single- and multiple-dry water years, and that plans include a water recycling analysis that incorporates a description of the wastewater collection and treatment system within the agency's service area along with current and potential recycled water uses.

[7] John Barrasso, October 10, 2018, *Congress Passes America's Water Infrastructure Act*, https://www.barrasso.senate.gov/public/index.cfm/2018/10/congress-passes-america-s-water-infrastructure-act, accessed October 12, 2022.

[8] One acre-foot is the amount of water required to cover one acre of ground (43,560 square feet) to a depth of 1 foot.

[9] California Department of Water Resources, 2022, Urban Water Management Plans, https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans, accessed on October 12, 2022.

California Water Code

The Water Code states that the water resources of the state must be put to beneficial use and that waste or unreasonable use of water must be prevented. The Water Code contains many statutes regarding various water-related issues, including flood control, water rights, riparian rights, water quality, and the formation of municipal water districts.

California Building Code: CALGreen

The California Building Standards Commission adopted the nation's first green building standards in July 2008, the California Green Building Standards Code (California Code of Regulations [CCR], Title 24, Part 11), also known as CALGreen. CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure in California unless otherwise indicated in the code. It establishes planning and design standards for sustainable site development, including water conservation measures and requirements that new buildings reduce water consumption by 20 percent below a specified baseline. CALGreen is updated every three years to allow for consideration and possible incorporation of new efficiency technologies and methods. The mandatory provisions of CALGreen became effective January 1, 2011. The 2022 CALGreen standards became effective January 1, 2023.

California Plumbing Code

The latest version of the California Plumbing Code (24 CCR Part 5) was issued in 2022 and is updated on a three-year cycle. It includes standards for plumbing fixtures, sanitary and stormwater drainage, and design criteria for potable and recycled water systems.

California Health and Safety Code

A portion of the California Health and Safety Code is dedicated to water issues, including testing and maintenance of backflow prevention devices, coloring of pipes carrying recycled water, and programs addressing cross-connection control by water users.

Recycled Water Regulations

Two state agencies have primary responsibility for regulating the application and use of recycled water: the California Department of Public Health and the SWRCB, Division of Drinking Water. Planning and implementing water recycling projects entail numerous interactions with these regulatory agencies prior to project approval. The California Department of Public Health establishes the statewide effluent bacteriological and treatment reliability standards for recycled water uses in 22 CCR Division 4, Environmental Health. Title 22 establishes standards for each general type of use based on the potential for human contact with recycled water. The SWRCB is responsible for establishing and enforcing requirements for the application and use of recycled water within California. Permits are required from the SWRCB for a water recycling operation. As part of the permit application process, applicants are required to demonstrate that the proposed recycled water operation will not exceed the ground and

surface water quality objectives in the basin management plan and that the operation is compliant with Title 22 requirements.[10]

Water Conservation in Landscaping Act of 2006

Assembly Bill (AB) 1881, also known as the Water Conservation in Landscaping Act of 2006, required the California Department of Water Resources (DWR) to develop a State Model Water Efficient Landscape Ordinance (MWELO). The State's MWELO was issued on October 8, 2009. Under AB 1881, cities and counties are required to adopt the State MWELO by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the updated model ordinance.

The MWELO was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and to build resiliency for future droughts. The 2015 revisions to the MWELO increased water-efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf.

Water Conservation Act of 2009

Senate Bill (SB) X7-7, also known as the Water Conservation Act of 2009, requires all water suppliers to increase water-use efficiency. The legislation sets an overall goal of reducing statewide per-capita water by 20 percent by 2020, with an interim goal of a 10 percent reduction in statewide per-capita water use by 2015. Effective in 2016, urban retail water suppliers that do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans. SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards.

Mandatory Water Conservation

Following the declaration on July 15, 2014, of a state of emergency due to drought conditions, the SWRCB adopted Resolution No. 2014-0038 for emergency regulation of statewide water conservation efforts. These regulations, which went into effect on August 1, 2014, were intended to reduce outdoor urban water use and persuade all California households to voluntarily reduce their water consumption by 20 percent. Water companies with 3,000 or more service connections were required to report monthly water consumption to the SWRCB.

2018 Water Conservation Legislation (Assembly Bill 1668 and Senate Bill 606)

On May 31, 2018, Governor Brown signed two bills (AB 1668 and SB 606) that established long-term standards for water suppliers. The bills called for the creation of new urban efficiency standards for indoor and outdoor residential use; commercial, industrial, and institutional water use for landscape irrigation with dedicated meters; and water loss in the water distribution system. The SWRCB adopted these standards by regulation. The indoor water use standard will be 55 gallons per person per day until January

[10] Further information on recycled water regulations can be found online: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/RecycledWater.html.

2025; the standard will become stricter over time, decreasing to 50 gallons per person per day in January 2030. The outdoor water use standard will be based on land cover, climate, and other factors determined by the DWR and SWRCB. The SWRCB was to adopt the outdoor standard by June 2022 and the water leaks standard by July 2020 pursuant to prior legislation (SB 555, 2015). The legislation also includes changes to Urban Water Management Plan (UWMP) preparation requirements.

Governor's 2021 Drought Declaration

Governor Gavin Newsom declared a drought state of emergency on April 21, 2021, and asked state agencies to partner with local water districts and utilities to make Californians aware of drought conditions and to encourage a reduction in water usage by promoting DWR's Save Our Water Campaign and other water conservation programs. The proclamation also included measures to be implemented by the DWR, SWRCB, the California Department of Fish and Wildlife, and the Department of Food and Agriculture that included coordinating state and local actions to address issues stemming from continued dry conditions.

The governor issued subsequent drought emergency proclamations on April 12, May 10, July 8, and October 19, 2021, and again on March 28, 2022. The July 8, 2021, proclamation called on Californians to voluntarily reduce water use by 15 percent from their 2020 levels. The October 19, 2021, proclamation required local water suppliers to implement water shortage contingency plans that are responsive to local conditions and prepare for the possibility of a third dry year. The March 28, 2022, proclamation requires that by May 25, 2022, the SWRCB must consider adopting emergency regulations defining nonfunctional turf[11] and banning irrigation of nonfunctional turf in the commercial, industrial, and institutional sectors. The proclamation also required that by May 25, 2022, SWRCB must consider adopting emergency regulations to implement the shortage response actions specified in the UWMP for a water shortage level of up to 20 percent. The SWRCB tracks and reports monthly on the state's progress toward achieving a 15 percent reduction in statewide urban water use compared to 2020 use.

State Water Resources Control Board 2022 Water Conservation Regulations

On January 4, 2022, the SWRCB adopted an emergency regulation, which was readopted in December 2022 and remains in effect until December 2023. The emergency regulation requirements prohibit:

- Outdoor watering that lets water run onto sidewalks and other areas.
- Washing vehicles without an automatic shutoff nozzle.
- Washing hard surfaces like driveways and sidewalks that don't absorb water.
- Filling decorative fountains, lakes, or ponds without a recirculation pump.
- Outdoor watering within 48 hours after at least a quarter inch of rainfall.
- Watering decorative grass on public medians.

On May 24, 2022, the SWRCB adopted a second emergency regulation. The emergency regulation went into effect on June 10, 2022, and remains in effect. The emergency regulation requirements include:

[11] Nonfunctional turf is turf that is ornamental and not otherwise used for human recreation purposes, such as school fields, sports fields, and parks.

- Prohibition on watering decorative grass in commercial, industrial, and institutional areas, including common areas of homeowners' associations.
- Urban water suppliers must implement all conservation actions in their locally adopted plans meant to address at least a water shortage level of 10 to 20 percent (Level 2) by June 10, 2022.

Regional Regulations

East Bay Municipal Utility District Regulations Governing Water Service

The EBMUD's Regulations Governing Water Service provides the standards and procedures for new connections to the EBMUD's water system.[12] New or expanded service is only provided by EBMUD after all applicable water-efficiency measures have been installed, as described in Section 31, *Water Efficiency Requirements*. Applicants requesting water service must supply plumbing and landscaping plans for review and approval from EBMUD's Water Conservation Division.

East Bay Municipal Utility District 2020 Urban Water Management Plan

Based on the state regulations mentioned previously, all water suppliers must submit an UWMP every five years to the California DWR in accordance with California Water Code requirements. EBMUD adopted its current 2020 UWMP in June 2021.[13] The 2020 UWMP describes water demands, available water supply sources, and supply reliability for its service area in five-year increments for normal years, single-dry years, and multiple-dry years up to year 2045. The UWMP also provides a water shortage contingency plan, demand management measures to increase water-use efficiency, and current and planned water conservation efforts.

East Bay Municipal Utility District Water Contingency Plan

EBMUD's Water Shortage Contingency Plan (WSCP) includes a coordinated response to drought situations and guides EBMUD's planning and response under such conditions.[14] The WSCP defines the process for collecting information on water supply availability, assessing conditions, determining fiscal actions, allocating resources, enforcing regulatory water-use restrictions, monitoring customer response, and implementing drought communications. The WSCP describes EBMUD's actions to implement and enforce regulations and restrictions for managing a water shortage when it declares a water shortage emergency under the authority of the Water Code. It also describes EBMUD's planned actions to manage supply and demand before and during a water shortage to ensure a reliable water supply.

[12] East Bay Municipal Utility District, 2022, Regulations, https://www.ebmud.com/customers/new-meter-installation/regulations/, accessed October 12, 2022.

[13] East Bay Municipal Utility District, June 2021, *Urban Water Management Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022.

[14] East Bay Municipal Utility District, June 2021, *Water Shortage Contingency Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022.

East Bay Municipal Utility District Water Conservation Master Plan

The 2021 update to EBMUD's Water Conservation Master Plan summarizes EBMUD's comprehensive water conservation strategies and initiatives to promote water conservation.[15] The plan presents an overview of EBMUD water demand, water savings, and future conservation and drought response plans. Its 10-year implementation schedule is consistent with water-demand reduction targets established by the Urban Water Management Planning Act and the Water Conservation Act of 2009.

Local Regulations

Oakland General Plan

Chapter 3, *Conservation*, of the Oakland General Plan Open Space, Conservation, and Recreation Element, addresses conservation, development, and use of Oakland's natural resources, including water. Policies applicable to the proposed project related to water are outlined in Table 4.16-1, *Oakland General Plan Policies Relevant to Water and the Proposed Project*.

TABLE 4.16-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO WATER AND THE PROPOSED PROJECT

Policy No.	Text
Open Space, Conservation, and Recreation Element	
CO-4.1	**Water Conservation.** Emphasize water conservation and recycling strategies in efforts to meet future demand.
CO-4.2	**Drought-Tolerant Landscaping.** Require use of drought tolerant plants to the greatest extent possible and encourage the use of irrigation systems which minimize water consumption.
CO-4.3	**Use of Reclaimed Water.** Promote the use of reclaimed wastewater for irrigating landscape medians, cemeteries, parks, golf courses, and other areas requiring large volumes of non-potable water.
CO-4.4	**Water Conscious Development Patterns.** Encourage regional development patterns which make environmentally sound use of water resources.
CO-5.1	**Protection of Groundwater Recharge.** Encourage groundwater recharge by protecting large open space areas, maintaining setbacks along creeks and other recharge features, limiting impervious surfaces where appropriate, and retaining natural drainage patterns within newly developing areas.

Source: City of Oakland, June 1996, *City of Oakland General Plan*, *Open Space, Conservation, and Recreation (OSCAR) Element*.

Oakland Municipal Code

The OMC includes directives to address the efficient use of water in Oakland. OMC Chapter 18.01, *Water Efficient Landscaping Ordinance*, enforces the State MWELO through the building permit plan review process. The Water Efficient Landscaping Ordinance (WELO) standards are intended to minimize the use of water and maximize healthy landscapes and promote drought-tolerant landscaping and prudent water use.

[15] East Bay Municipal Utility District, 2021, *Water Conservation Strategic Plan 2021*, https://www.ebmud.com/water/conservation-and-rebates/water-conservation-publications/water-conservation-master-plan/, accessed October 12, 2022.

Chapter 18.02, *Sustainable Green Building Requirements for Private Development*, integrates environmentally sustainable strategies in building construction and landscapes. The chapter requires that all newly constructed homes implement the Bay-Friendly Landscape Guidelines, the Bay-Friendly Landscape Scorecards, and the Bay-Friendly Gardening Guide. All newly constructed homes in Oakland are required by law to follow the practices of the Bay-Friendly Landscape Guidelines.

Oakland Standard Conditions of Approval

The Oakland SCAs were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCAs are related to water and are applicable to the proposed project.

- SCA-86. Green Building Requirements – Small Projects:
  a) Compliance with Green Building Requirements During Plan Check: 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) for projects using the Bay Friendly Basic Landscape Checklist.
     i. The following information shall be submitted to the City for review and approval with application for a building permit:
        - Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards.
        - Completed copy of the green building checklist approved during the review of a 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 (b) below.
        - Other documentation to prove compliance.
     ii. The set of plans in subsection (a) shall demonstrate compliance with the following:
        - CALGreen mandatory measures.
        - All applicable green building measures identified on the checklist approved during the review of a Planning and Zoning permit, or submittal of a Request for Revision Plan-check application that shows the previously approved points that will be eliminated or substituted.
  b) Compliance with Green Building Requirements During Construction: The project applicant shall comply with the applicable requirements of CALGreen and the Green Building Ordinance during construction. The following information shall be submitted to the City for review:
     i. Completed copy of the green building checklists approved during review of the Planning and Zoning permit and during the review of the Building permit.
     ii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.
- SCA-89. Recycled Water: Pursuant to Section 16.08.030 of the Oakland Municipal Code, the project applicant shall provide for the use of recycled water in the project for feasible recycled water uses unless the City determines that there is a higher and better use for the recycled water, the use of

recycled water is not economically justified for the project, or the use of recycled water is not financially or technically feasible for the project. Feasible recycled water uses may include, but are not limited to, landscape irrigation, commercial and industrial process use, and toilet and urinal flushing in non-residential buildings. The project applicant shall contact the New Business Office of the East Bay Municipal Utility District (EBMUD) for a recycled water feasibility assessment by the Office of Water Recycling. If recycled water is to be provided in the project, the project drawings submitted for construction-related permits shall include the proposed recycled water system and the project applicant shall install the recycled water system during construction.

- SCA-90. Water Efficient Landscape Ordinance (WELO): The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage.

  For any landscape project with an aggregate (total noncontiguous) landscape area equal to 2,500 sq. ft. or less, the project applicant may implement either the Prescriptive Measures or the Performance Measures, of, and in accordance with the California's Model Water Efficient Landscape Ordinance.

  Prescriptive Measures: Prior to construction, the project applicant shall submit documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance.

  Performance Measures: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes the following:

  a) Project Information:
     i. Date,
     ii. Applicant and property owner name,
     iii. Project address,
     iv. Total landscape area,
     v. Project type (new, rehabilitated, cemetery, or homeowner installed),
     vi. Water supply type and water purveyor,
     vii. Checklist of documents in the package, and
     viii. Applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package."
  b) Water Efficient Landscape Worksheet
     i. Hydrozone Information Table
     ii. Water Budget Calculations with Maximum Applied Water Allowance and Estimated Total Water Use
  c) Soil Management Report
  d) Landscape Design Plan
  e) Irrigation Design Plan
  f) Grading Plan

  Upon installation of the landscaping and irrigation systems, the project applicant shall submit a Certificate of Completion and landscape and irrigation maintenance schedule for review and approval

by the City. The Certificate of Compliance shall also be submitted to the local water purveyor and property owner or his or her designee.

Existing Conditions

Water Supply Sources

EBMUD provides potable water to the project vicinity, the City of Oakland, and approximately 1.4 million customers throughout portions of Alameda and Contra Costa Counties. EBMUD's water system encompasses a 332-square-mile area extending north to Crockett; south to San Lorenzo; east to Walnut Creek, Alamo, Danville, and San Ramon; and west to the San Francisco Bay.

The EBMUD water supply system collects, transmits, treats, and distributes water from its primary water source, the Mokelumne River. The Mokelumne Aqueducts convey the Mokelumne River supply from Pardee Reservoir across the Sacramento-San Joaquin River Delta to local storage and treatment facilities. EBMUD has water rights that allow for delivery of up to a maximum of 325 MGD from the Mokelumne River, subject to the availability of Mokelumne River runoff, senior water rights of other users, and downstream fishery flow requirements.[16] Approximately 90 percent of the raw water entering EBMUD's system originates from the Mokelumne River watershed.

EBMUD's secondary water supply source, which supplies approximately 10 percent of the water demand, is local runoff from the East Bay area watersheds, which is stored in reservoirs within EBMUD's service area. The reservoirs provide a six-month emergency supply of water in the event of outages or failures of the Modelumne Aqueducts. The availability of water from local runoff depends on two factors: hydrologic conditions and reservoir storage availability. In dry years, evaporation can exceed runoff, resulting in net loss of local supply. Local runoff, on average, supplies the East Bay with 23 MGD during normal hydrologic years and with almost no runoff during dry hydrologic years.

EBMUD is engaged in efforts to identify additional sources of supply to meet long-term demands. In 1970, EBMUD executed a contract with the United States Bureau of Reclamation for delivery of Central Valley Project (CVP) water from the American River. In 2000, the United States Bureau of Reclamation, EBMUD, and Sacramento region parties reached an agreement to modify the contract and to develop a joint water supply intake on the Sacramento River rather than the American River. The CVP provides for delivery of up to 133,000 acre-feet (AF) in a single qualifying year, not to exceed a total of 165,000 AF in three consecutive qualifying years. EBMUD will generally qualify for CVP deliveries during dry periods, and therefore the CVP supply constitutes a critical component of EBMUD's water supply reliability.

Additionally, EBMUD is developing the Bayside Groundwater Project in phases to provide a source of supplemental supply during dry years. Construction of the Bayside Groundwater Project Phase I was completed in 2010, with construction of a facility that enables EBMUD to inject potable drinking water into the deep aquifer of the South East Bay Plain Groundwater Basin during wet years and also to extract, treat, and use groundwater as a supplemental supply during times of drought. Future phases will expand

[16] East Bay Municipal Utilities District, 2022, About your water, https://www.ebmud.com/water/about-your-water, accessed October 12, 2022.

on this operation. Although the potential for using groundwater from the Bayside Groundwater Project Phase I was previously included in the 2015 UWMP as an available dry-year supply, EBMUD did not include groundwater as a potential supplemental supply source in the 2020 UWMP. EBMUD published the Groundwater Sustainability Plan for the East Bay Plain Groundwater Subbasin in January 2022. When the evaluation and recommendations are finalized and a sustainable yield has been determined, groundwater will be included as a supplemental water supply source in the 2025 UWMP. [17]

Water Supply Availability

EBMUD's 2020 UWMP was prepared in accordance with the Urban Water Management Planning Act previously described. The 2020 UWMP addresses EMBUD's water system and includes a description of the water supply sources, historical and projected water use, and a comparison of water supply to water demands during normal, single-dry, and multiple-dry years. The 2020 UWMP also addresses water use efficiency legislation, including EMBUD's 2020 water use targets, as required by the Water Conservation Act, and the implementation plan for meeting the 2020 water use targets.[18]

The 2020 UWMP assumes a population increase of 21 percent within EBMUD's service area in Alameda County between 2020 and 2040, with up to 1.7 million customers by 2040.[19] This is much larger than the population increase of 12 percent that the California Department of Finance predicts by 2040.[20] Therefore, EMBUD's future water demand estimates are conservative. In addition, while the number of EBMUD customers has increased steadily since 1970, the average daily water demand has been relatively stable, outside of drought periods. Factors contributing to a low overall water demand include: (1) EBMUD's water recycling and conservation programs; (2) droughts and customer rationing; (3) changes in customer usage patterns or changes in customer class (i.e., a reduction in industrial and petroleum accounts with increases in single- and multifamily residential accounts); and (4) legislative changes, including new state policies, new plumbing efficiency standards, and CALGreen water-efficiency landscape ordinances. Alameda County had a 15.5 percent reduction in water usage in August 2022 during the latest drought period, compared to August 2020.[21]

Table 4.16-2, *Normal Year Water Supply and Demand Comparison,* and Table 4.16-3, *Multiple Dry Years Supply and Demand Comparison*, present the water supply and demand assessment in MGD for normal years, single dry years, and multiple dry years. For the purposes of this supply-demand analysis, EBMUD's water supply projections include EBMUD's Mokelumne River flow entitlement, and imported water from the CVP diverted through the Freeport facilities.

[17] East Bay Municipal Utility District, June 2021, *Urban Water Management Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022.

[18] East Bay Municipal Utility District, June 2021, *Urban Water Management Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022.

[19] East Bay Municipal Utility District, June 2021, *Urban Water Management Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022

[20] California Department of Finance, 2022. Total Population for California and Counties, https://dof.ca.gov/forecasting/demographics/projections, accessed October 24, 2022.

[21] State Water Resources Control Board, 2022. Water Conservation and Production Reports. https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.html, accessed October 24, 2022.

TABLE 4.16-2 NORMAL YEAR WATER SUPPLY AND DEMAND COMPARISON

	2020	2025	2030	2035	2040	2045	2050
Mokelumne System (MGD)	>181	>186	>190	>194	>201	>209	>218
Demand Totals (MGD)	181	186	190	194	201	209	218
Water Need (TAF)	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Notes: MGD: million gallons per day; TAF: thousand acre-feet
Source: East Bay Municipal Utility District, June 2021, *Urban Water Management Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022.

TABLE 4.16-3 MULTIPLE DRY YEARS SUPPLY AND DEMAND COMPARISON

		2020	2025	2030	2035	2040	2045	2050
1st Dry Year	Mokelumne System (MGD)	121	126	129	132	138	144	151
	CVP Supplies (MGD)	60	60	60	60	60	60	60
	Total Supplies (MGD)	181	186	189	192	198	204	211
	Voluntary Rationing (%)	0	0	1	1	2	2	3
	Need for Water (TAF)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2nd Dry Year	Mokelumne System (MGD)	82	86	89	92	98	104	111
	CVP Supplies (MGD)	74	74	74	74	74	74	74
	Total Supplies (MGD)	156	161	165	167	172	178	185
	Mandatory Rationing (%)	13	13	13	14	14	14	15
	Need for Water (TAF)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
3rd Dry Year	Mokelumne System (MGD)	141	145	146	145	132	118	105
	CVP Supplies (MGD)	12	12	12	12	12	12	12
	Total Supplies (MGD)	153	157	158	157	155	130	117
	Mandatory Rationing (%)	15	15	15	15	15	15	15
	Water Need: Base Condition (TAF)	**0**	**0**	**0**	**0**	**28**	**52**	**75**
	Water Need Water: High Demand (TAF)	**0**	**0**	**21**	**35**	**60**	**97**	**125**
	Water Need Water: Extreme Drought (TAF)	**0**	**0**	**0**	**13**	**32**	**55**	**84**

Notes: MGD: million gallons per day; TAF: thousand acre-feet
Source: East Bay Municipal Utility District, June 2021, *Urban Water Management Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022.

Under normal conditions and the first and second years of a drought period, EBMUD can meet customer demand through 2050. However, during the third year of a drought, even with customer demand reduction measures in place, EBMUD would need to obtain supplemental water.

EBMUD has developed policies for monitoring, assessing, and responding to annual water supply availability.[22] Each year, EBMUD prepares a Water Supply Availability and Deficiency report by March 1, evaluating the adequacy of that year's water supply. These reports inform EBMUD's Board of Directors whether to declare a water shortage emergency and implement the Drought Management Program, institute mandatory water-use reductions, and/or obtain supplemental water supplies.

EBMUD has also invested in projects to provide operational flexibility and improve its ability to address drought conditions. Options include purchasing supplies through interties with the Contra Costa Water District, San Francisco Public Utilities Commission, Dublin San Ramon Services District, and the City of Hayward; expansion of EBMUD's water conservation program; drought surcharges on water use; and voluntary or mandatory water rationing. However, during extreme and catastrophic water shortage conditions, EBMUD may implement temporary dry-year supplemental water supply options, including:

- Trucking recycled water for customers for approved uses.
- Drawing from reserve supplies (reservoir standby storage).
- Pursuing emergency transfers or exchanges.[23]

Water Distribution Network

EBMUD's water supply system consists of a network of reservoirs, aqueducts (pipelines), water treatment plants (WTPs), pumping plants, and other distribution facilities and pipelines that convey Mokelumne River water from Pardee Reservoir to EBMUD customers.

Untreated water from Pardee Reservoir is transported approximately 91 miles to EBMUD WTPs and reservoirs through the Pardee Tunnel, the Mokelumne Aqueducts, and the Lafayette Aqueducts. The Mokelumne Aqueducts terminate in Walnut Creek. From Walnut Creek, the water is sent directly to EBMUD's three in-line filtration WTPs or to one of the EBMUD reservoirs. From the reservoirs, water is transported to three conventional WTPs—Upper San Leandro WTP, San Pablo WTP, and Sobrante WTP. The Upper San Leandro WTP serves the City of Oakland.

After the water is treated at one of the WTPs, it is distributed throughout EBMUD's service area, which is divided into more than 125 pressure zones ranging in elevation from sea level to 1,450 feet. Approximately 50 percent of treated water is distributed to customers by gravity alone. The water distribution network includes 4,200 miles of pipe, 131 pumping plants, and 167 water distribution reservoirs.[24]

[22] East Bay Municipal Utility District, June 2021, *Water Shortage Contingency Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022.

[23] East Bay Municipal Utility District, June 2021, *Urban Water Management Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022.

[24] East Bay Municipal Utility District, June 2021, *Urban Water Management Plan 2020*, https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan, accessed October 12, 2022.

4.16.2.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's 2020 CEQA Thresholds of Significance Guidelines, the proposed project would result in a significant water impact if it would:

1. 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.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to water.

4.16.2.3 IMPACT DISCUSSION

UTIL-4	**The proposed project would not exceed water supplies available to serve the project from existing entitlements and resources and would not require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects.**

As discussed in Chapter 4.12, *Population and Housing*, of this Draft EIR, the proposed ten single-family units are estimated to add 24 residents, based on the average household size in the City of Oakland in 2022 of 2.4 persons. The latest data from EBMUD (from September 2021 to August 2022) show an average of 64 gpd per person for residential water use.[25] This would result in a water demand of 1,536 gpd or 1.72 acre-feet per year (AFY) for the proposed project. This is a conservative estimate because 95 percent of the housing stock in Oakland was built prior to 1990[26] and therefore does not reflect the reduction in water demand associated with low-flow plumbing fixtures and water-efficient landscaping that are required for new construction by CALGreen. The proposed project would comply with the latest CALGreen requirements, which typically result in a 20 percent reduction in water use. The proposed project's water demand of 1,536 gpd is a very small percentage of EMBUD's estimated water demand of 186,000,000 gpd in 2025, and this increase has been incorporated in the 2020 UWMP, which assumes a 21 percent population increase in the service area by 2040 and an additional 300,000 customers.

As shown previously in Table 4.16-2 and Table 4.16-3, EBMUD has adequate water supplies to meet the demand in normal years, single-dry years, and all but the third year in a three-year drought scenario. EBMUD anticipates meeting water demands in future dry years by implementing its WSCP and Conservation Master Plan. As described previously, EBMUD also has options to obtain supplemental water supplies, expand EBMUD's water conservation program, or implement drought surcharges or mandatory water rationing to ensure that the water demands of its customers are met.

[25] State Water Resources Control Board, September 7, 2022, *June 2014-July 2022 Urban Water Supplier Monthly Reports (Raw Dataset),* https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/2022/uw-supplier-data090722.xlsx, accessed October 23, 2022.

[26] United States Census, 2022, Oakland, CA Housing Statistics, https://www.infoplease.com/us/census/california/oakland/housing-statistics, accessed October 24, 2022.

The City mandates water reduction with the implementation of CALGreen requirements (OMC Chapter 18.02, and SCA-86, *Green Building Requirements – Small Projects*), the Bay-Friendly Water Efficient Landscape Guidelines, and the State MWELO (SCA-90, *Water Efficiency Landscape Ordinance [WELO]*). The California Plumbing Code has instituted requirements for new construction that mandate the installation of ultra-low-flow toilets and low-flow showerheads. Residential, commercial, and industrial usage can be expected to decrease as a result of the implementation of more aggressive water conservation practices, including the active distribution of water-saving devices, and providing high-efficiency toilets and high-efficiency clothes washer rebates. SCA-89, *Recycled Water*, also requires the project applicant to provide for the use of recycled water for feasible recycled water uses. In addition, in the case of a water shortage, EBMUD would implement the WSCP, as outlined in the 2020 UWMP. As required by the Water Code, the WSCP includes the following elements:

- Stages of action in response to water shortages;
- Estimated minimum supply available for multiple consecutive dry years;
- Preparation for and response to catastrophic supply interruptions;
- Water use prohibitions, penalties, and consumption-reduction methods;
- Analysis of revenue and expenditure impacts due to reduced water sales and drought mitigation measures;
- Water Shortage Contingency Resolution;
- Water-reduction monitoring procedures.

The proposed project would install a 6-inch water line that supplies water to each of the proposed homes along Viewcrest Lane and connects to an existing 12-inch water line under Campus Drive. The proposed project would not result in the construction of new water treatment or distribution facilities by EBMUD. Additionally, new or expanded service is only provided by EBMUD when all applicable water-efficiency measures have been installed in accordance with EBMUD's Regulations Governing Water Service. The proposed project would also be required to comply with the Oakland General Plan policies described in Section 4.16.2.1, *Environmental Setting*, and the requirements of EMBUD's Water Conservation Master Plan.

The proposed project would generate 1,536 gpd and add 24 customers to EBMUD's service area, which had 1.4 million customers as of 2020. The proposed project was accounted for in the 2020 UWMP as part of the 21 percent increase in population by 2040. Compliance with the CALGreen; EBMUD's regulations governing water service; and Oakland's SCA-86, *Green Building Requirements – Small Projects*, SCA-89, *Recycled Water*, and SCA-90, *Water Efficiency Landscape Ordinance [WELO]*, would result in *less-than-significant* impacts with respect to water supply and the need for new and/or expanded water facilities.

Significance without Mitigation: Less than significant.

UTIL-5 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to water.

The area considered for cumulative water supply impacts is the service area for EMBUD. Other future projects in the service area would result in increases in water demand. The EMBUD forecasts that it will

have sufficient water supplies in its service area through 2050 for normal water years and single-dry years, but will need to implement reductions in water use, acquisition of supplemental supplies, and its WSCP for the third year of drought conditions (see Impact Discussion UTIL-4). Also, projects that meet the SB 610 criteria, such as residential projects with more than 500 dwelling units, would be required to prepare water supply assessments. EMBUD would review such projects for the adequacy of water supply and would periodically update the UWMP to ensure that there are adequate water supplies and contingency plans for future residents and other customers.

All new development would be required to conserve water and implement water-efficiency measures according to CALGreen and the MWELO irrigation requirements. Also, all future development would be required to pay service connection fees to EBMUD and monthly water bills. These charges are used to offset the cost of system maintenance and capital upgrades in EBMUD's service area. Water supply deficits in dry years would be met by implementing the WSCP and other water conservation efforts. Existing regulations will result in a reduction in per-capita water use over time, which would ensure that cumulative impacts with respect to water supply would be *less than significant.*

Significance without Mitigation: Less than significant.

4.16.3 SOLID WASTE

4.16.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Resource Conservation and Recovery Act of 1976

The Resource Conservation and Recovery Act of 1976 (Title 40 of the Code of Federal Regulations, Part 258, *Criteria for Municipal Solid Waste Landfills*) contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills.

State Regulations and Agencies

California Department of Resources Recycling and Recovery

California Department of Resources Recycling and Recovery (CalRecycle) administers and provides oversight for all of California's state-managed non-hazardous waste handling and recycling programs. The goal of CalRecycle is to assist California in achieving the highest waste reduction, recycling, and reuse goals in the nation. It provides limited grants and loans to help California cities, counties, businesses, and organizations meet the state waste reduction, reuse, and recycling goals. It also provides funds to clean up solid waste disposal sites and co-disposal sites, including facilities that accept hazardous waste. CalRecycle develops, manages, and enforces waste disposal and recycling regulations, including AB 939 and SB 1016.

California Solid Waste Reuse and Recycling Access Act

The California Solid Waste Reuse and Recycling Access Act requires new commercial, multifamily, and high-density single-family residential developments of five units or more to include adequate, accessible, and convenient areas for collecting and loading recyclable materials. The act also requires CalRecycle to develop a model ordinance for adoption by any local agency to provide adequate areas for the collection and loading of recyclable materials. Local agencies are required to adopt the model or an ordinance of their own that establishes standards, including space allocation for the collection and loading of recyclable materials.

California Integrated Waste Management Act

California's Integrated Waste Management Act of 1989 (AB 939) requires cities and counties to prepare integrated waste management plans (IWMPs) and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires that each city and county prepare Source Reduction and Recycling Elements as part of the IWMP. These elements are designed to assist recycling services in achieving diversion goals, stimulate local recycling in manufacturing, and encourage the purchase of recycled products.

In 2007, SB 1016 amended AB 939 to establish a per-capita disposal measurement system based on two factors—a jurisdiction's reported total disposal of solid waste, divided by the jurisdiction's population. CalRecycle sets a per-capita disposal rate target for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per-capita disposal rate.

Organic Waste Methane Emissions Reduction Act

In September 2016, SB 1383, also known as the Organic Waste Methane Emissions Reduction Act, was signed into law, establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants in various sectors of California's economy. SB 1383 establishes goals to reduce the landfill disposal of organics by achieving a 50 percent reduction in the 2014 level of statewide disposal of organic waste by 2020 and a 75 percent reduction by 2025. SB 1383 grants CalRecycle the regulatory authority to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food must be recovered for human consumption by 2025. Methane emissions from the decomposition of organic waste in landfills are a significant source of greenhouse gas emissions that contribute to global climate change. Organic materials—including waste that can be readily recycled or composted—account for a significant portion of California's overall waste stream.

Mandatory Commercial Recycling Requirements

AB 341 (Chapter 476) set a statewide solid waste diversion goal of 75 percent by 2020. The bill was passed in 2011 and took effect July 1, 2012, mandating recycling for businesses producing four or more cubic yards of solid waste per week or multifamily residential dwellings of five or more units. Under AB 341, businesses and multifamily dwellings of five or more units in the project area must separate recyclables

from trash and either subscribe to recycling services, self-haul their recyclables, or contract with a permitted private recycler.

CALGreen Building Code

CALGreen establishes building standards for sustainable site development. Sections 4.408 and 5.408, *Construction Waste Reduction Disposal and Recycling*, mandate that, in the absence of a more stringent local ordinance, a minimum of 65 percent of nonhazardous construction and demolition debris generated during most new construction must be recycled or salvaged. CALGreen requires developers to prepare and submit to the City a waste management plan for on-site sorting of construction debris or use a waste management company with verifiable documentation.

Regional Regulations

Alameda County Countywide Integrated Waste Management Plan

The Alameda County Countywide Integrated Waste Management Plan (CoIWMP) serves as a roadmap for Alameda County's solid waste management and recycling programs. The CoIWMP document has two elements—the Countywide Siting Element and the Countywide Summary Plan—and describes both the current state and the goals for waste and materials management in the county.

In addition to addressing core infrastructure needs—collection, transport, processing facilities, and landfills—the document provides the context and rationale for implementing current and future waste management programs in Alameda County. The Alameda County Waste Management Authority has adopted the goals, objectives, and policies in the CoIWMP, which will help meet the requirements to have a minimum of 15 years of landfill capacity.[27]

Alameda County Waste Reduction and Recycling Initiative

To address the requirements of AB 939, the Alameda County Waste Reduction and Recycling Initiative (Measure D) mandated Alameda County to divert 75 percent of its solid waste from landfills by the year 2010. The diversion rate has plateaued over the past ten years and as of 2020, Alameda County had a 67 percent diversion rate. The new goal is to meet the 75 percent diversion rate by the year 2045.

Alameda County Ordinance 2008-01 Prohibiting the Landfill Disposal of Plant Debris

Ordinance 2008-01 was enacted in 2009 and applies to any businesses or organization that generate significant amounts of plant debris that they haul to Alameda County disposal facilities or place in bins for collection. Affected businesses and organizations include, but are not limited to, residential landscapers and gardeners, commercial landscapers and gardeners, commercial and residential property managers,

[27] Stop Waste, January 2022, *Countywide Integrated Waste Management Plan (CoIWMP)*, http://www.stopwaste.org/resource/reports/countywide-integrated-waste-management-plan-coiwmp#:~:text=The%20Alameda%20County%20Countywide%20Integrated,materials%20management%20in%20the%20County, accessed October 13, 2022.

municipalities, institutions (e.g., colleges, hospitals), and businesses subscribing to four cubic yards or more of weekly solid waste collection service.

Local Regulations

Oakland Municipal Code

The OMC includes directives to minimize adverse impacts associated with solid waste in Oakland. OMC Chapter 15.34, *Construction and Demolition (C&D) Debris Waste Reduction and Recycling Ordinance*, requires implementation of a recycling and waste reduction plan for construction and demolition activities. The City of Oakland's Construction and Demolition (C&D) Ordinance is intended to further the goals of AB 939 and Alameda County's Measure D.

As part of the building permit application process, applicants must complete a Waste Reduction and Recycling Plan (WRRP) that details the plan for salvaging and recycling C&D debris generated during the construction of the project. Standards call for salvage and/or recycling 100 percent of asphalt and concrete and at least 65 percent of all remaining debris. These standards are subject to administrative adjustment, and applicants must follow the standards published at the time of building permit application.

The City will not issue a building permit for a regulated project without an approved WRRP on file. Upon approval of the WRRP and issuance of the permit(s), the applicant shall execute the plan. Prior to the Final Inspection, Temporary Certificate of Occupancy, or Certificate of Occupancy, the applicant must complete and obtain approval of a Construction and Demolition Summary Report. The Construction and Demolition Summary Report documents the salvage, recycling, and disposal activities that took place during the project.

Title 17 of the OMC, *Oakland Planning Code*, regulates physical development in Oakland. Chapter 17.188, *Recycling Space Allocation Requirements*, prescribes standards that ensure consistency with the requirements of the California Solid Waste Reuse and Recycling Access Act of 1991. Compliance with these standards ensures that adequate, accessible, and convenient locations for the collection and storage of recyclable materials are provided and that the containers and enclosures are compatible with surrounding land uses and structures.

Oakland Standard Conditions of Approval

The Oakland SCAs were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions shall be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCA is related to solid waste and is applicable to the proposed project.

- SCA-82. Construction and Demolition Waste Reduction and Recycling. The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (Chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type

construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

Existing Conditions

Solid Waste Collection

Nonhazardous solid waste and yard trimmings are collected in Oakland by Waste Management of Alameda County (WMAC). They are taken to WMAC's Davis Street Transfer Station in San Leandro. After undergoing processing, most of the waste (91 percent) is transferred by trucks to the Altamont and Potrero Hills Landfills in Livermore and Suisun City. The remainder of the solid waste is transported to various landfills in the Bay Area.

WMAC provides curbside recycling in the city, including the project site. Curbside recycling includes glass, aluminum and tin, motor oil, cardboard, magazine and newsprint, and plastic. Recyclable materials are also delivered to the Davis Street Transfer Station.

Landfills Serving the City

There are 23 landfills that serve Oakland. Approximately 67 percent of the solid waste generated by the city in 2019 was sent to the Altamont Landfill in Livermore. The Potrero Hills Landfill received approximately 24 percent of the city's solid waste in 2019, and the remainder was sent to various other landfills.[28]

As of June 2016, the Altamont Landfill was estimated to have a remaining capacity of 65 million cubic yards, or 53 percent of its total capacity.[29] Its closure date is December 2070. The Altamont Landfill has a permitted throughput of 11,150 tons per day. In 2021, the annual throughput for the landfill was 776,766 tons,[30] and the daily throughput was 3,107 tons per day.[31] Therefore, the landfill has a residual capacity of 8,043 tons per day. Solid waste collected in 2019 from Oakland accounted for approximately 926 tons per day.[32]

[28] California Department of Resources Recovery and Recycling, *Jurisdiction Disposal by Facility with Reported Alternative Daily Cover (ADC) and Alternative Intermediate Cover (AIC): Disposal during 2019 for Oakland*, https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility, accessed October 13, 2022.

[29] California Department of Resources Recovery and Recycling, 2019, SWIS Facility/Site Activity Details: Altamont Landfill & Resource Recovery (01-AA-0009), https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/7?siteID=7, accessed October 13, 2022.

[30] California Department of Resources Recovery and Recycling, *Solid Waste Landfilling Data: 2021 Landfill Tonnage Report*, https://www2.calrecycle.ca.gov/LandfillTipFees/, accessed October 13, 2022.

[31] Based on five days per week operation (250 days per year).

[32] California Department of Resources Recovery and Recycling, *Jurisdiction Disposal by Facility with Reported Alternative Daily Cover (ADC) and Alternative Intermediate Cover (AIC): Disposal during 2019 for Oakland*, https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility, accessed October 13, 2022.

The Potrero Hills Landfill was estimated to have a remaining capacity of 14 million cubic yards, or 17 percent of its total capacity, as of January 2006.[33] The closure date for this landfill is February 2048. The Potrero Hills Landfill has a permitted throughput of 4,330 tons per day. In 2021, the throughput was 728,685 tons for a daily throughput of approximately 2,915 tons per day.[34] Therefore, the landfill has a residual capacity of 1,415 tons per day. Solid waste collected in 2019 from the City of Oakland accounted for approximately 333 tons per day.[35]

Compliance with AB 939 is measured by comparing the CalRecycle target disposal rates for residents and employees to actual disposal rates. The latest reported target disposal rates for Oakland in 2020 were 5.8 pounds per day (ppd) for residents and 15.3 ppd for employees.[36] The actual disposal rates were 3.5 ppd for residents and 7.7 ppd for employees. Therefore, solid waste diversion in Oakland complies with AB 939.

4.16.3.2 STANDARDS OF SIGNIFICANCE

According to the City of Oakland's 2020 CEQA Thresholds of Significance Guidelines, the proposed project would result in a significant solid waste impact if it would:

1. 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.
2. Violate applicable federal, state, and local statutes and regulations related to solid waste.
3. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to solid waste.

[33] California Department of Resources Recovery and Recycling, 2019, SWIS Facility/Site Activity Details: Potrero Hills Landfill (48-AA-0075), https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1194?siteID=3591, accessed October 13, 2022.

[34] California Department of Resources Recovery and Recycling, 2019, *Solid Waste Landfilling Data: 2021 Landfill Tonnage Report*, https://www2.calrecycle.ca.gov/LandfillTipFees/, accessed October 13, 2022.

[35] California Department of Resources Recovery and Recycling, *Jurisdiction Disposal by Facility with Reported Alternative Daily Cover (ADC) and Alternative Intermediate Cover (AIC): Disposal during 2019 for Oakland*, https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility, accessed October 13, 2022.

[36] California Department of Resources Recovery and Recycling, 2020, Jurisdiction Diversion/Disposal Rate Detail, https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/slcp/capacityplanning/recycling/JurisdictionDiversionDetail?year=2020&jurisdictionID=345, accessed October 13, 2022.

4.16.3.3 IMPACT DISCUSSION

UTIL-6 The landfill serving the proposed project would have sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs and would not require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects.

There are 23 landfills that serve Oakland, and the Altamont Landfill and the Potrero Hill Landfill receive more than 90 percent of the city's waste. The Altamont Landfill has a residual capacity of 8,043 tons per day, and the Potrero Hill Landfill has a residual capacity of 1,415 tons per day.

Assuming a residential solid waste generation rate of 3.5 ppd per resident, the proposed project would generate 84 ppd (or 0.04 tons per day). The total estimated solid waste generation rate for the proposed project is less than 0.1 percent of the daily residual capacity (i.e., 9,458 tons per day) of the two landfills receiving most of the city's waste. Furthermore, the Potrero Hills Landfill is not estimated to close until 2048, and the Altamont Landfill has a closure year of 2070.

Additionally, the proposed project would be required to comply with OMC Chapter 15.34 which requires implementation of a recycling and waste reduction plan for construction and demolition activities. The proposed project would also implement the requirements of SCA-82, *Construction and Demolition Waste Reduction and Recycling*. Project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with Chapter 17.188 of the City's Planning Code.

With continued compliance with applicable regulations and Oakland SCAs, solid waste generated by the proposed project would not exceed the landfill capacity available to the city. Therefore, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs, resulting in a *less-than-significant* impact.

Significance without Mitigation: Less than significant.

UTIL-7 The proposed project would not violate applicable federal, State, and local statutes and regulations related to solid waste.

Oakland has complied with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste. The City's per-capita disposal rate is below the target rate established by CalRecycle.[37] Furthermore, Alameda County has complied with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste. The County also established a Recycling Initiative

[37] California Department of Resources Recovery and Recycling, 2020, Jurisdiction Diversion/Disposal Rate Detail, https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/slcp/capacityplanning/recycling/JurisdictionDiversionDetail?year=2020&jurisdictionID=345, accessed October 13, 2022.

(Measure D) that mandated the diversion of 75 percent of the county's solid waste from landfills by 2010 and implemented an ordinance prohibiting disposal of plant debris at landfills (Ordinance 2008-01).

The proposed project would implement the County's solid waste requirements in addition to the requirements of the OMC and Oakland SCAs. Together, these requirements would ensure that the proposed project is consistent with statutes and regulations related to solid waste. Therefore, the proposed project would not violate applicable statutes and regulations related to solid waste, resulting in *no impact*.

Significance without Mitigation: No impact.

UTIL-8 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to solid waste.

The area considered for cumulative impacts is the County of Alameda. The primary landfill in the county is the Altamont Landfill. The Potrero Hills Landfill also serves the county but is outside the county.

New projects could result in increased population and employment in Alameda County. As shown in Table 4.12-2, *Oakland General Plan Housing Element 2010-2040 Projected Growth*, in Chapter 4.12, *Population and Housing*, of this Draft EIR, the total county population is projected to increase by 333,700 from 2020 to 2040. The total number of jobs in the county is expected to increase by 120,690. Using the statewide residential per-capita disposal rate of 5.2 pounds per person per day and the statewide employee per-capita disposal rate of 11.9 pound per employee per day,[38] Table 4.16-4, *Increase in Solid Waste Generation, 2020 through 2040,* shows that the total increase in solid waste generation from 2020 to 2040 is 3,171,461 ppd or 1,586 tons per day.

TABLE 4.16-4 INCREASE IN SOLID WASTE GENERATION, 2020 THROUGH 2040

Solid Waste Generation Source	Increase	Solid Waste Generation Rate (pounds/person/day)	Solid Waste Generated (pounds/day)
Residents	333,700	5.2	1,735,250
Employees	120,690	11.9	1,436,211
Total			**3,171,461**

Source: California Department of Resources Recovery and Recycling, California's Statewide Per Resident, Per Employee, and Total Disposal Since 1989, https://calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/graphs/disposal/, accessed October 13, 2022.

The City's per-capita disposal rate is below the statewide rates, and this estimate is therefore conservative. The residual capacity of the Altamont and Potrero Hills Landfills is approximately 9,458 tons per day (18,916,000 ppd). Thus, there is sufficient landfill capacity in the region for the cumulative increase in solid waste disposal.

[38] California Department of Resources Recovery and Recycling, California's Statewide Per Resident, Per Employee, and Total Disposal Since 1989, https://calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/graphs/disposal/, accessed October 13, 2022.

Like the proposed project, other projects in Oakland would be required to comply with Chapter 15.34 of the OMC. The project applicants would complete WRRPs as part of the Building Permit Application process, detailing the plan for salvaging and recycling construction and demolition debris generated by their projects. Standards call for salvage and/or recycling 100 percent of asphalt and concrete and at least 65 percent of all remaining debris, which would reduce the volume of solid waste transported to landfills. Therefore, with continued compliance with the applicable regulations and an increase in recycling and landfill diversion rates, solid waste cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.17 WILDFIRE

This chapter includes an evaluation of the potential environmental consequences related to wildfire from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing wildfire conditions in the vicinity of the proposed project, and identifies mitigation measures, if required, that would avoid or reduce significant impacts.

This chapter is based, in part, on the *Evacuation Time Estimate Effect Analysis* prepared by Fehr & Peers, dated March 7, 2023. See Appendix I, *Transportation Impact Analysis*, of this Draft Environmental Impact Report (EIR).

4.17.1 ENVIRONMENTAL SETTING

4.17.1.1 REGULATORY FRAMEWORK

Federal Regulations

National Fire Protection Association Standards

National Fire Protection Association (NFPA) codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. NFPA standards are guidelines for fire protection that are referenced in the California Fire Code (CFC). Specific standards applicable to wildland fire hazards include, but are not limited to:

- NFPA 1141, Fire Protection Infrastructure for Land Development in Wildlands
- NFPA 1142, Water Supplies for Suburban and Rural Fire Fighting
- NFPA 1143, Wildland Fire Management
- NFPA 1144, Reducing Structure Ignition Hazards from Wildland Fire
- NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations

State Regulations

Fire Hazard Severity Zones and Responsibility Areas

The California Department of Forestry and Fire Protection (CAL FIRE) designates Fire Hazard Severity Zones (FHSZ) as authorized under California Government Code Sections 51175 et seq. CAL FIRE considers many factors when designating fire severity zones, including fire history, existing and potential vegetation fuel, flame length, blowing embers, terrain, and weather patterns for the area. CAL FIRE designates FHSZs for three types of areas depending on what level of government is financially responsible for fire protection.

- LRA, Local Responsibility Area: Incorporated communities are financially responsible for wildfire protection. There is one severity zone in the LRA, the very high fire hazard severity zone (VHFHSZ).

- **SRA, State Responsibility Area:** CAL FIRE and contracted counties are financially responsible for wildfire protection. There are three FHSZs in SRAs: moderate, high, and very high.
- **FRA, Federal Responsibility Area:** Federal agencies are responsible for wildfire protection, such as the United States Forest Service, National Park Service, Bureau of Land Management, or United States Department of Defense.

2019 Strategic Fire Plan for California

CAL FIRE produced the *2019 Strategic Fire Plan for California*, which contains goals, objectives, and policies to prepare for and mitigate for the effects of fire on California's natural and built environments.[1] The *2019 Strategic Fire Plan for California* focuses on fire prevention and suppression activities to protect lives, property, and ecosystems, in addition to providing natural resource management to maintain State forests as a resilient carbon sink to meet California's climate change goals. A key component of the *2019 Strategic Fire Plan for California* is the collaboration between communities to ensure that fire suppression and natural resource management are successful.[2]

State Responsibility Area and VHFHSZ Fire Safe Regulations

California Code of Regulations (CCR) Title 14, Division 1.5, Chapter 7, Subchapter 2, *SRA/VHFHSZ Fire Safe Regulations*, establishes minimum wildfire protection standards for construction and development in the SRA and VHFHSZ and requires CAL FIRE to review development proposals and enact recommendations as conditions of approval in these zones. These regulations apply to all residential buildings in the VHFHSZ and all tentative and parcel maps. The standards include basic emergency access and perimeter wildfire protection measures, signing and building numbering, private water supply resources for emergency fire use, and vegetation modification. Fire Safe Regulations also include a minimum setback of 30 feet for all buildings from property lines and/or the center of a road. Section 1273.08, *Dead-End Roads,* of the standards provides regulations for the maximum lengths of single-access roadways:

- Parcels zoned for less than 1 acre: 800 feet
- Parcels zoned for 1 to 4.99 acres: 1,320 feet
- Parcels zoned for 5 to 19.99 acres: 2,640 feet
- Parcels zoned for 20 acres or larger: 5,280 feet

Fire Safe Regulations, Section 1299.03, *Fire Hazard Reduction Around Buildings and Structure Requirements*, provides defensible space requirements for areas within 30 feet of a structure (Zone 1) and between 30 and 100 feet from a structure (Zone 2). In Zone 1, all dead and dying plants must be removed, and any flammable vegetation that could catch fire must be removed. In Zone 2, horizontal and vertical spacing among shrubs and trees must be established and maintained.

[1] California Department of Forestry and Fire Protection, January 2019, *2019 Strategic Fire Plan*, https://www.fire.ca.gov/media/bo2fdzfs/strategicplan2019-final.pdf, accessed October 18, 2022.

[2] California Department of Forestry and Fire Protection, January 2019, *2019 Strategic Fire Plan*, https://www.fire.ca.gov/media/bo2fdzfs/strategicplan2019-final.pdf, accessed October 18, 2022.

Public Resources Code Sections 4291 and 4442

Public Resources Code (PRC) Section 4291 is intended for any person who owns, leases, controls, operates, or maintains a building or structure in a mountainous area, forest-covered lands, shrub-covered lands, grass-covered lands, or land that is covered with flammable material, regardless of whether the property is in an SRA or VHFHSZ. Section 4291 requirements are:

- Develop and maintain defensible space within 100 feet from each side of a structure. Fuels shall be maintained and spaced in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure.
- An ember-resistant zone within 5 feet of a structure.
- A more intense fuel reduction between 5 and 30 feet of a structure.
- Remove portions of trees that extend within 10 feet of a chimney or stovepipe.
- Maintain trees, shrubs, and other plants adjacent or overhanging a building free of dead or dying wood.
- Maintain the roof of structures free of leaves, needles, or other vegetative materials.

PRC Section 4442 regulates the use of internal combustion engines that use hydrocarbon fuels on forest-covered land, brush-covered land, and grass-covered land. Internal combustion engines, like those used in construction and maintenance, must be equipped with a spark arrester—a device that removes and retains carbon and other flammable particles from the exhaust of engines that use hydrocarbon fuels. These engines must be maintained in effective working order or be constructed, equipped, and maintained for the prevention of fire.

California Building Standards Code

The California Buildings Standards Code (CCR Title 24) provides 12 different codes for construction and buildings in California. This code is updated every three years, with the most recent version effective January 1, 2023. Oakland regularly adopts the most recent version of the California Building Standards Code, with local amendments, into the Oakland Municipal Code, Title 15, *Building and Construction*.

Building Design Standards

The California Building Code (CBC) (24 CCR Part 2) identifies building design standards, including those for fire safety. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. Residential buildings are plan checked by local city building officials for compliance with the CBC and any applicable local edits. Typical fire safety requirements of the CBC include the installation of fire sprinklers in buildings and other facilities; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction in high FHSZs; requirements for smoke and fire barriers in building materials; requirements for smoke-detection systems; and exiting requirements.

Materials and Methods for Exterior Wildfire Exposure

Chapter 7A of the CBC, *Materials and Methods for Exterior Wildfire Exposure*, prescribes building materials and construction methods for new buildings in an FHSZ and locally designated Wildland-Urban interface (WUI). It establishes minimum standards that increase the ability of a building in any FHSZ to resist the intrusion of flames or burning embers projected by a vegetation fire, systematically reducing losses due to conflagration. Chapter 7A contains requirements for roofing; attic ventilation; exterior walls; exterior windows and glazing; exterior doors; decking; protection of underfloor, appendages, and floor projections; and ancillary structures. Prior to building permit issuance, the local building official must provide the applicant with a certification that the building proposed to be built complies with all state and local building standards. Prior to permitting the final building, the local building official must provide the applicant with a final inspection report to demonstrate compliance with all state and local regulations. This section of the CBC enforces other State requirements, including vegetation management pursuant to CFC Section 4906 and PRC Section 4291.

California Fire Code

The CFC incorporates, by adoption, the International Fire Code of the International Code Council with California amendments. This is the official Fire Code for the State and all political subdivisions. It is found in 24 CCR Part 9, and like the CBC is revised and published every three years by the California Building Standards Commission. Also like the CBC, the CFC is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions. The CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Typical fire safety requirements include installation of sprinklers in all buildings; fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. Important sections of the CFC include Chapter 33, *Fire Safety During Construction and Demolition,* and Chapter 49, *Requirements for Wildland-Urban Interface Fire Areas*.

Chapter 33: Fire Safety During Construction and Demolition

The purpose of Chapter 33 of the CFC is to provide reasonable safety to life and property from fire during construction and demolition operations, including those in underground locations. Specific requirements include a prohibition of smoking on-site except in approved areas and management of combustible materials and debris, cutting and welding, electrical wiring, and cooking. Chapter 33 also includes several requirements to ensure access for firefighting personnel and equipment, means of egress for buildings, and water supply for fire protection. Other requirements include requiring landowners or an authorized agent to prepare a site safety plan prior to building permit issuance; provide a fire watch during nonworking hours for new construction exceeding 40 feet in height; and provide a water supply for fire protection as soon as combustible materials arrive on the site.

Chapter 49: Requirements for Wildland-Urban Interface Fire Areas

Chapter 49 of the CFC applies to any geographical area identified as an FHSZ by CAL FIRE. It defines FHSZs, connects to the SRA Fire Safe Regulation requirements for defensible space, and parallels requirements for wildfire protection buildings construction and hazardous vegetation fuel management in other sections of the CCR and PRC. Chapter 49 includes a definition for WUI and provides requirements for fire protection plans, landslide plans, long-term vegetation management, and creation and maintenance of defensible space for all new development in the WUI. Specific requirements for new development include:

- Fire protection plans that are based on a project-specific wildfire hazard assessment that includes the location, topography, aspect, and climatic and fire history. The plan must identify conformance with all applicable wildfire protection regulations, statutes, and local ordinances, whichever is stricter. The plan must also address fire department access, egress, road and address signage, water supply, and State fuel reduction requirements. The plan shall identify mitigation measures to address the project's specific wildfire risk.
- Vegetation management that reduces vegetation that is not fire resistant in proximity to a structure and maintains vegetation as it matures. The enforcing agency can require a landscape plan for vegetation management zones adjacent to structures and roadways. The landscape plans must include a delineation of the 30-foot and 100-foot fuel management zones around all structures; identification of existing and proposed vegetation; identification of irrigated areas; a plant legend with botanical and common names; and identification of ground coverings in the 30-foot zone. This section provides specific limits on vegetation types in the 30-foot and 100-foot zones.
- Enforces the defensible space requirements in PRC Section 4291 and California Government Code Section 51182.
- Requires lands in an LRA VHFHZ to comply with California Fire Safe Regulations.

Governor's Office of Planning and Research Fire Hazard Technical Advisory

The Governor's Office of Planning and Research published the Fire Hazard Technical Advisory in 2015 and revised it in 2022 as a planning guide for addressing fire hazards, reducing risk, and increasing resilience across California's diverse communities and landscapes. The guide provides a range of goals, policies, and programs for fire hazard prevention and mitigation, disaster preparedness, and emergency response and recovery. The 2022 update includes specific land use strategies to reduce fire risk to buildings, infrastructure, and communities.

Regional Regulations

Alameda County Community Wildfire Protection Plan

The Alameda County *Community Wildfire Protection Plan* (Alameda County CWPP),[3] adopted in January 2015, is intended to provide a foundation for and facilitate continued collaboration between the multiple agencies providing fire protection and vegetation management in Alameda County. The goal is to protect human life and reduce the loss of property, critical infrastructure, and natural resources due to wildfire. The Alameda County CWPP provides fire risk reduction measures through the following actions:

- Increased collaborative planning and cooperative actions that will build useful relationships between communities and agencies.
- Reduction of hazardous fuels in the WUI.
- Creation and maintenance for defensible space for structures and properties.
- Reduction of structural ignitability hazards.
- Planning of evacuation protocols and drills.

Local Regulations

Oakland General Plan

The Safety Element of the Oakland General Plan comprises seven chapters: 1) Introduction, 2) Public Safety, 3) Geologic Hazards, 4) Fire Hazards, 5) Hazardous Materials, 6) Flooding, and 7) Hazards by Area. Chapter 2, *Public Safety*, discusses the framework through which the City of Oakland plans for, mitigates, responds to, and recovers from environmental disasters and emergencies and from public-safety incidents. Chapter 4, *Fire Hazards*, analyzes the City's risk from wildfires and structural fires; the City's firefighting capabilities, water supply, and roadway standards; and emergency evacuation routes. Chapter 7, *Hazards by Area*, aggregates hazards identified in Safety Element Chapters 3 through 6 and provides an overview of the primary land use characteristics for six planning areas. The project site is in the Upper Hills planning area, which is essentially the same as the South Hills planning area identified in the Land Use and Transportation Element discussed elsewhere in this Draft EIR. In addition, the Open Space, Conservation, and Recreation Element includes policies and guidelines relating to wildfire. Policies from these elements are reproduced in Table 4.17-1, *Oakland General Plan Policies Relevant to Wildfire and the Proposed Project*.

TABLE 4.17-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO WILDFIRE AND THE PROPOSED PROJECT

Policy No.	Text
Open Space, Conservation, and Recreation Element	
CO-10.1	**Flammable Vegetation Control.** Subject to the availability of City resources and at the discretion of the City Council and applicable City departments, control flammable vegetation on public and private open space lands in the Oakland Hills to reduce wildfire hazards.

[3] Diablo Fire Safe Council, January 2015, *Community Wildfire Protection Plan Update, Alameda County*, http://www.diablofiresafe.org/pdf/2015_Draft_AlCo_CWPP_Update.pdf, accessed October 18, 2022.

TABLE 4.17-1 OAKLAND GENERAL PLAN POLICIES RELEVANT TO WILDFIRE AND THE PROPOSED PROJECT

Policy No.	Text
CO-10.2	**Fire Prevention Measures.** As determined necessary by the City, require individual property owners and developers in high hazard areas to reduce fire hazards on their properties through a range of preventative measures. Landscaping and site planning in these high hazard areas should minimize future wildfire hazards.
Safety Element	
PS-1	Maintain and enhance the City's capacity to prepare for, mitigate, respond to and recover from disasters and emergencies.
FI-1	Maintain and enhance the City's capacity for emergency response, fire prevention and fire-fighting
FI-2	Continue, enhance or implement programs that seek to reduce the risk of structural fires.
FI-3	Prioritize the reduction of the wildfire hazard, with an emphasis on prevention

Source: City of Oakland, *City of Oakland General Plan*, *Open Space, Conservation, and Recreation Element* (June 1996) and *Safety Element* (November 2004).

Oakland Municipal Code

The Oakland Municipal Code (OMC) includes directives to minimize adverse impacts to wildfire in Oakland. These directives are in Chapter 15.04, *Oakland Amendments to California Model Building Construction Codes*, and Chapter 15.12, *Oakland Fire Code.* OMC Section 15.04.3.2.065, *CBC Chapter 18B added*, requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as the amount of proposed excavation and degree of site slope. During project construction, the volume of the excavated fill material could exceed 50 cubic yards and could result in a 20 percent slope on-site, and the depth of excavation could exceed five feet at any location. Therefore, the project applicant would be required to apply for the grading permit and prepare a grading plan, erosion and sedimentation control plan, and drainage plan. Chapter 15.12 adopts the CFC with amendments.

Section 202, *General Definitions*, of the Fire Code has been amended to define WUI fire areas as:

> . . . all of that area within the city as defined by the Fire Code Official of the City of Oakland, including, but not limited to, the area north and east of the following boundaries:
>
> Beginning at the MacArthur Freeway at the San Leandro border to Foothill Boulevard; west on Foothill Boulevard to Stanley; west on Stanley to 98th Avenue; south on 98th Avenue to Stearns Avenue; west on Stearns to Burr Street; west on Burr Street to Thermal; west on Thermal to 8500 Thermal; south at 8500 Thermal to MacArthur Boulevard; west on MacArthur Boulevard to 82nd Avenue; north on 82nd Avenue to Utah Street; west on Utah Street to Partridge Avenue; south on Partridge Avenue to Outlook Avenue; west on Outlook Avenue to Seminary Avenue; south on Seminary Avenue to MacArthur Boulevard; west on MacArthur Boulevard to Buell Street; north on Buell Street to Tompkins Avenue; west on Tompkins Avenue to End; straight line from Tompkins Avenue to Wisconsin Street; west on Wisconsin Street to Carlsen Street; west on Carlsen Street to Maple Avenue; south on Maple Avenue to Morgan Avenue; west on Morgan Avenue to Barner; south on Barner to Morgan Avenue; west on Morgan Avenue to Coolidge Avenue; North on Coolidge Avenue to Alida Street; west on Alida Street to Lincoln Avenue; south on Lincoln Avenue to Tiffin Road; west on Tiffin Road to Whittle Avenue; west on Whittle Avenue to Fruitvale Avenue (Dimond Park); follow the southern and western boundary of Dimond Park to El Centro Road; west

on El Centro Road to Dolores; west on Dolores to Park Boulevard; north on Park Boulevard to Piedmont boundary; Piedmont boundary to Mt. View Cemetery; northern boundary of Mt. View Cemetery to Clarewood Drive; west on Clarewood Drive to Broadway Terrace; south on Broadway Terrace to Margarido Drive; west on Margarido Drive to Lawton; west on Lawton to Broadway; north on Broadway to Keith Avenue; west on Keith Avenue to College Avenue; and north on College Avenue to the corporate limits of the City of Berkeley.

Oakland Standard Conditions of Approval

The Oakland Standard Conditions of Approval (SCAs) were designed to achieve consistency between project approvals and enact environmental protection measures. These conditions should be incorporated into a project as requirements of the project and are designed to substantially mitigate environmental effects. The following SCA is related to wildfire and is applicable to the proposed project:

- SCA-39. Seismic Hazards Zone (Landslide/Liquefaction): The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.
- SCA-47. Designated Very High Fire Severity Zone—Vegetation Management:
  a) Vegetation Management Plan Required: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures:
     i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically;
     ii. Removal of leaves and needles from roofs and rain gutters;
     iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure;
     iv. Trimming back vegetation around windows;
     v. Removal of flammable vegetation on hillside slopes greater than 20 percent; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5 percent or less, within 50 feet on slopes of 5 to 20 percent and within 100 feet or to the property line on slopes greater than 20 percent.
     vi. All trees shall be pruned up at least a quarter the height of the tree from the ground at the base of the trunk;
     vii. Clearing out ground-level brush and debris; and All non-ornamental plants, seasonal weeds and grasses, brush, leaf litter and debris within 30 feet of the residential structure shall be cut, raked and removed from the parcel.
     viii. Stacking woodpiles away from structures at least 20 feet from residential structures.

ix. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species.

b) Fire Safety Prior to Construction: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6 feet or less from the construction, access and staging areas to reduce the threat of fire ignition pursuant to Sections 304.1.1 and 304.1.2 of the California Fire Code.

c) Fire Safety During Construction: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Pursuant to Section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current State fire marshal service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition.

d) Smoking Prohibition: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code.

- SCA-83. Underground Utilities: 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.

Oakland Emergency Operations Plan

The City has developed an all-hazards Emergency Operations Plan (EOP) to ensure that the necessary and appropriate actions are taken to protect Oakland residents and visitors and their property from any threat or hazard.[4] The EOP provides for the effective mobilization of all of City resources to meet any condition constituting a local emergency, state of emergency, or state of war emergency. It provides for the organization, powers and duties, services, and staff of the City's emergency organization and describes how the City will prepare for, prevent, respond to, recover from, and mitigate the effects of all types of hazard and threats. There are three parts to the City of Oakland EOP:

[4] City of Oakland, October 2021, *Emergency Operations Plan*, https://cao-94612.s3.amazonaws.com/documents/EOP-v4-Council-DRAFT_20211112.pdf, accessed October 18, 2022.

- **Base Plan**. Describes fundamental systems, strategies, policies, assumptions, responsibilities, and operational priorities that the City will follow to guide and support emergency management efforts.
- **Emergency Support Functions**. Establishes 17 emergency support functions that describe discipline-specific emergency goals, objectives, capabilities, and responsibilities. These emergency support functions include references to City agency/department plans and procedures.
- **Incident Annexes**. Highlights unique planning assumptions, policies, procedures, and emergency preparedness, response, and recovery actions specific to a particular hazard or threat. These include earthquake, severe weather, wildland fire, tsunami, terrorism, and civil unrest. The Wildland Fire Annex contains specific measures for conducting evacuations in the event of a wildfire.

Oakland Hazard Mitigation Plan

The *Oakland 2021-2026 Hazard Mitigation Plan* (HMP) aims to equitably reduce risk and increase resilience by establishing and promoting a comprehensive mitigation strategy and efforts to protect the whole community and environment from identified natural and man-made hazards.[5] The 18 mitigation actions in the HMP are designed to reduce or eliminate loss resulting from hazard events. They are assigned priority for implementation and for seeking grant funding over the next five years. Mitigation actions that have been designated high priority for implementation address wildfire, flood, sea level rise hazards, and others.

Oakland Fire Department Vegetation Inspection Program

Oakland Fire Department's (OFD) Vegetation Management Unit conducts approximately 26,000 public and private property inspections every year in the eastern hills of Oakland (Oakland Hills), much of which is designated VHFHSZ. Inspections are mandated by City of Oakland Ordinance No. 11640. The inspection area is divided into five districts (which differ from city council districts), each of which has an inspector.[6] The purpose of these inspections is to identify and mitigate hazards that could contribute to the spread, growth, and intensity of wildfire. Inspections are done annually, and property owners are required to actively maintain their parcels in a fire-safe condition year-round. On City-owned and private lots, fire companies and vegetation management inspectors annually inspect properties to identify and notice those that are out of compliance with the defensible space standards in the Oakland Fire Code (OMC Chapter 15.12). If a property is not in compliance, inspections are repeated until the property is brought into compliance. The following summarizes the defensible space requirements for developed lots (lots with a house or other structures) in the Oakland Fire Code:[7]

- Keep a 30-foot minimum defensible space around all buildings (height of grass, weeds, brush 6 inches or less).
- Keep 10-foot minimum clearances next to the roadside including street rights-of-way.

[5] City of Oakland, July 2021, *2021-2026 Hazard Mitigation Plan*, https://cao-94612.s3.amazonaws.com/documents/2021-07-01_OaklandHMP_AdoptedFinal-1.pdf, accessed October 18, 2022.

[6] City of Oakland Fire Department, November 2019, *City of Oakland Vegetation Management Plan*, https://cao-94612.s3.amazonaws.com/documents/Oakland-VMP_Revised-Draft_NOV-1-2019.pdf, accessed October 18, 2022.

[7] City of Oakland, Compliance Standards for Vegetation Inspection, https://www.oaklandca.gov/topics/compliance-standards-for-vegetation-inspections, accessed October 18, 2022.

- Remove all portions of trees within 10 feet of chimneys or stovepipe outlets.
- Keep roof and gutters free of leaves, needles, or other dead/dying wood.
- Install a spark arrestor on chimneys or stovepipe outlets.
- Remove all tree limbs within 6 feet of the ground so as not to create fuel ladders.
- Remove dead/dying vegetation from the property.

4.17.1.2 EXISTING CONDITIONS

Wildfire Overview

Wildfire hazard refers to the fuels in a given location and the intensity with which an area is likely to burn. Wildfire risk is the probability and consequences of a wildfire burning in an area (based on the wildfire hazard, potential losses, and weather conditions). The following paragraphs summarize wildfire, its causes, and its secondary effects.

Wildfire Background

Wildfires burn in many types of vegetation, including forest, woodland, scrub, and grassland. Many species of native California plants are adapted to fire, and fire can play an important role in the health of these ecosystems.[8] Between 2010 and 2017, wildfires in California burned about 265,000 acres of forest land, 207,000 acres of scrub vegetation, 99,000 acres of grassland, 18,000 acres of desert vegetation, and 14,000 acres of other vegetation types.[9] Wildfires have been more frequent and more intense over the past several years.[10]

Wildfire Causes

Though wildfires can have natural origins (e.g., lightning) and play an important role in certain ecosystems, a 2017 study that evaluated 1.5 million wildfires in the United States between 1992 and 2012 found that humans were responsible for igniting 84 percent of wildfires, accounting for 44 percent of acreage burned.[11] The three most common types of human-caused wildfires are debris burning (logging slash, farm fields, trash, etc.), arson, and equipment use.[12] Power lines can also ignite wildfires through downed lines, vegetation contact, conductors that collide, and equipment failures.[13]

[8] California Department of Forestry and Fire Prevention, August 1999, *Learning to Live with Fire*, https://www.fire.ca.gov/media/8657/live_w_fire.pdf, accessed October 18, 2022.

[9] California Board of Forestry and Fire Protection, 2018, *Strategic Fire Plan for California*, https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf, accessed on November 4, 2022.

[10] California Department of Forestry and Fire Protection, 2022, "Stats and Events," https://www.fire.ca.gov/stats-events/, accessed November 4, 2022.

[11] Jennifer Balch, Bethany Bradley, John Abatzoglou, et. al., January 6, 2017, "Human-Started Wildfires Expand the Fire Niche Across the United States," https://www.pnas.org/content/pnas/114/11/2946.full.pdf, accessed October 18, 2022.

[12] Pacific Biodiversity Institute. 2007. Roads and Wildfires. http://www.pacificbio.org/publications/wildfire_studies/Roads_And_Wildfires_2007.pdf.

[13] Texas Wildfire Mitigation Project. 2018. "How Do Power Lines Cause Wildfires?" https://wildfiremitigation.tees.tamus.edu/faqs/how-power-lines-cause-wildfires.

An analysis of US Forest Service wildfire data from 1986 to 1996 determined that 95 percent of human-caused wildfires and 90 percent of all wildfires started within half a mile of a road, and that about 61 percent of all wildfires and 55 percent of human-caused wildfires started within approximately 650 feet (200 meters) of a road. The study concluded that the increase in human-caused ignition due to roads greatly outweighs the benefits of increased access for firefighters.[14]

There are three primary methods of wildfire spread:

- Embers. Embers are the most prolific cause of home ignition, at a rate of two out of every three homes destroyed. Embers are glowing or burning pieces of vegetation or construction debris that are lofted during a wildfire and can move up to a mile ahead of a wildfire, especially during high winds. These small embers or sparks may fall on the vegetation near a home (on dry leaves, needles, or twigs on the roof) and subsequently ignite the home. Embers can travel several miles during high wind events, such as the Diablo Winds, posing a potential risk to all structures without fire-resistant landscaping and construction within a mile of the fire.
- Direct Flame Contact. Direct flame contact refers to the transfer of heat by direct flame exposure. Direct contact will heat the building materials of the home, and if the time and intensity of exposure is severe enough, windows will break and materials will ignite.
- Radiant Heat. A house can catch fire from the heat that is transferred to it from nearby burning objects, even in the absence of direct flames or embers. By creating defensible space around homes, the risk from radiant heat is significantly reduced.

Secondary Effects of Wildfires

Secondary effects of wildfire are hazards resulting from wildfire, such as poor air quality, landslides, and power outages.

- Air Pollution. Smoke is made up of a complex mixture of gases and fine particles produced when wood and other organic materials burn. The biggest health threat from smoke is from fine particles that can penetrate the lungs and cause a range of health problems, from burning eyes and a runny nose to aggravated chronic heart and lung diseases. Exposure to particulate pollution is even linked to premature death. Some populations are more sensitive than others to smoke, for instance, people with heart or lung diseases, seniors, children, people with chronic illnesses, and pregnant women.[15]
- Landslides and Debris Flows. After a high intensity wildfire is suppressed, the burn scar is typically bare of the vegetative cover that supported the hillsides and steeper slopes. When supporting vegetation is burned away, hillsides become prone to destabilization and erosion, increasing the risk of landslides. Post-fire landslide hazards include fast-moving, highly destructive debris flows that can happen immediately following wildfires in response to high intensity rainfall events, and flows that are

[14] Pacific Biodiversity Institute, 2007, *Roads and Wildfires,* http://www.pacificbio.org/publications/wildfire_studies/Roads_And_Wildfires_2007.pdf, accessed October 18, 2022.

[15] United States Environmental Protection Agency, May 2021, *How Smoke from Fires Can Affect Your Health*, https://www.airnow.gov/sites/default/files/2021-08/how-smoke-from-fire-can-affect-your-health-2021-v1-d1.pdf, accessed October 18, 2022.

generated over longer time periods that are accompanied by root decay and loss of soil strength. Fires increase the potential for debris flows by increasing the imperviousness of soil so that it repels water, and by destroying vegetation that would slow and absorb rainfall and whose roots would help stabilize soil.[16] The burning of vegetation and soil on slopes more than doubles the rate that water will run off into watercourses.[17] Post-fire debris flows are particularly hazardous because they can happen with little warning, exert great impulsive loads on objects in their paths, strip vegetation, block drainage ways, damage structures, and endanger human life. Post-fire debris flows are most common in the two years after a fire and are usually triggered by heavy rainfall. It takes much less rainfall to trigger debris flows from burned basins than from unburned areas.

- Power Outages. Power outages relating to wildfire can occur from deliberate power shutoffs to reduce the risk of wildfires if power lines are damaged during dry, hot winds (such as the Diablo Winds). Outages can also be a result of wildfire damage to utilities. Outages prevent critical lifeline systems and essential facilities from functioning as needed to meet community or neighborhood needs. They can affect fuel, water, communication, heating and cooling, and other systems that require electricity.

Wildfire in the Project Area

General Plan Safety Element Planning Area

As described in the Safety Element Chapter 7, *Hazards by Area*, the project site is identified within the Upper Hills planning area of Oakland, which is essentially same area as the South Hills planning area identified in the Oakland General Plan's Land Use and Transportation Element.[18,19] This area is bounded roughly by Contra Costa County and the East Bay Regional Park District open spaces to the north and east, State Route 13 and Interstate 580 to the west and south, and the city of Berkeley to the west. Most of the Upper Hills planning area is zoned for residential and open space land uses. According to the Safety Element, the Upper Hills planning area is exposed to wildfire hazards because it is characterized by high, steep hills with significant natural areas.

Oakland Hills

The Oakland Hills are a fire-dependent ecosystem. Several factors make this area particularly prone to wildfires, including topography, weather patterns, and vegetation. As described in Chapter 3, *Project Description*, of this Draft EIR, CAL FIRE has designated the project site in a VHFHSZ.[20]

[16] United States Geological Survey, November 13, 2018, "New Post-wildfire Resource Guide Now Available to Help Communities Cope With Flood and Debris Flow Danger," https://www.usgs.gov/center-news/post-wildfire-playbook?qt-news_science_products=1#qt-news_science_products, accessed October 18, 2022.

[17] California Geological Survey, 2019, Post-Fire Debris Flow Facts, https://www.conservation.ca.gov/index/Pages/Fact-sheets/Post-Fire-Debris-Flow-Facts.aspx, accessed October 18, 2022.

[18] City of Oakland, March 1998, *City of Oakland General Plan, Land Use and Transportation Element*.

[19] City of Oakland, November 2004, *City of Oakland General Plan, Safety Element.*

[20] California Department of Forestry and Fire Protection, FHSZ Viewer, https://egis.fire.ca.gov/FHSZ/, accessed October 18, 2022.

According to the OMC's identification of the WUI (Section 4.17.1.1, *Regulatory Framework*), the project site is in Oakland's designated WUI. WUI areas occur when urban development is intermixed with wildland vegetation or when pockets of wildland vegetation occur inside developed areas. According to CAL FIRE, the WUI is subdivided into the intermix zone (where houses and wildland vegetation directly mingle), the interface zone (housing adjacent to wildland vegetation, but not mingled with it), and the influence zone (areas of wildfire-susceptible vegetation surrounding the other zones).[21] The interface and intermix zones carry the highest risk for wildfires affecting developed areas. Unlike fire in wildland areas, fires in WUI areas are more likely to damage or destroy buildings and infrastructure that support populations, the economy, and key services in the city. The project site is in the interface zone with the highest risk for wildfires affecting developed areas.

Wildfire History

Major wildfires have been known to occur in the Oakland Hills and adjacent to the project site. In 1970, a fire in the North Oakland Hills consumed 200 acres and destroyed 37 homes. In 1991 the Oakland-Berkeley Fire, also known as the Tunnel Fire, was fueled by record high temperatures, drought conditions, freeze-damaged trees, and strong easterly winds. This fire destroyed 3,354 single-family dwellings and 456 apartments and resulted in 150 injuries and 25 fatalities.[22] At the time, it was one of the costliest wildfires in United States history, causing 1.5 billion dollars in property damage.

Factors Influencing Wildfire

Several factors influence wildfire conditions and facilitate the spread of wildfires, including topography, fuels, weather conditions, and climate change. Human actions are the leading cause of wildfires in California, increasing the risk of wildfire devastating natural lands and communities. This section describes five factors on and surrounding the project site.

Fuel

As described in Chapter 4.3, *Biological Resources*, of this Draft EIR, the majority of the proposed development area has been disturbed by grading for past mineral exploration and adjacent development and by the spread of highly invasive French broom, which is being managed to reduce fire fuel loads. Cover in the proposed 2.6-acre development area consists of grasslands and oak scrub, with scattered native coast live oaks. Planted Monterey pine and a row of planted coast redwood are near the Campus Drive frontage of the proposed development area. The vegetation on the 17.4-acre conservation open space land is similar but primarily chaparral and oak scrub with some grasslands and oak woodland areas. Each type of vegetation contributes to fire hazard severity to varying degrees. The qualities of vegetation that directly influence fire risk include fuel type and size, loading, arrangement, chemical composition, and dead- and live-fuel moisture, which contribute to the flammability characteristics of the vegetation. Grass and brush fuel types react quickly to changes in weather such as low humidity or high wind speeds. Fires in areas covered by this vegetation type can spread quickly in gusty wind conditions.

[21]CAL FIRE, 2019, "Wildland Urban Interface," https://frap.fire.ca.gov/media/10300/wui_19_ada.pdf.
[22] City of Oakland, November 2004, *City of Oakland General Plan, Safety Element*.

Topography

Steep terrain or slope plays a key role in the rate and direction in which wildfires spread, since fires will normally burn much faster uphill. When the gradient of a slope doubles, the rate of spread of a fire will also likely double. The project site has slopes ranging from 2.7:1 (horizontal:vertical) to 1.8:1, with a few localized areas as steep as 1.7:1. Site topography generally slopes downward to the southwest toward San Francisco Bay. Wildfire can spread much more quickly up slopes than on level terrain because wind and slope tilt the flames over unburned fuel and bring it to ignition temperature sooner.[23] The steep hills around the project site would also be more susceptible to debris flows after a fire.

Weather and Winds

The San Francisco Bay Area has a Mediterranean-like climate with hot, dry summers and cool, wet winters. Rainfall typically occurs during the winter months due to storm fronts that move inland from the Pacific Ocean. Oakland receives an average of approximately 22.7 inches of precipitation annually.[24] Because the summer months are generally hot and dry, the risk of wildfires has historically been greatest in summer and fall. Relative humidity is also an important fire-related weather factor. As humidity levels drop, the dry air causes vegetation moisture levels to decrease, thereby increasing the likelihood that plant material will readily ignite and burn; the risk of wildfire increases when lightning strikes occur during dry periods.

Wind is a primary weather factor of wildfire behavior. Diablo winds—a type of downslope, warm, northerly to northeasterly wind—flow over the Diablo Mountain range and have had reported speeds of up to 100 miles per hour in the Oakland Hills.[25] As wind speeds increase, the potential rates of fire spread, intensity, and ember spread also increase. Gusty and erratic wind conditions can cause a wildfire to spread irregularly, making it difficult to predict its path and effectively deploy fire suppression forces. Winds from the northeast in the late summer and fall compound the severity of fire conditions, as does the lower relative humidity, creating extreme fire danger or "red flag" conditions.[26] Northeasterly winds are especially dangerous because they are accompanied by low humidity, which can dry out trees and other fuel that may also be weakened by the winds. This can increase wildfire conditions on the project site. Wind shifts can also occur suddenly due to temperature changes and interactions with steep slopes or hillsides, causing fires to spread unpredictably. Fall has historically been one of the most dangerous times for wildfire risk because periods of very high temperatures, low humidity, and strong winds cause red flag warnings and extreme fire danger.

[23] United States Department of Agriculture, June 1983, *How to Predict the Spread and Intensity of Forest and Range Fires*, https://gacc.nifc.gov/nwcc/content/products/fwx/publications/How_to_Predict_Fire_Spread_and_Intensity_of_Forest_and_Range_Fires_int_gtr143.pdf, accessed October 18, 2022.

[24] Cal-Adapt, 2022, "Annual Averages," https://cal-adapt.org/tools/annual-averages, accessed November 4, 2022.

[25] Y. C. Liu, P. Di, S. H. Chen, et al., 2021, "Climatology of Diablo Winds in Northern California and Their Relationships With Large-Scale Climate Variabilities," *Clim Dyn* 56, 1335–1356, https://doi.org/10.1007/s00382-020-05535-5.

[26] A Red Flag Warning means warm temperatures, very low humidity, and stronger winds are expected to combine to produce an increased risk of fire danger. The National Weather Service issues "red flag" weather day warnings when certain weather elements such as low relative humidity and strong winds could lead to increased wildfire risk.

Human Actions

As previously stated, most wildfires are ignited by humans, including by direct acts such as arson or by general carelessness or accidents. Many fires originate in populated areas along roads and around homes and are often the result of the careless disposal of cigarettes, mowing of dead grass, electrical equipment malfunction, use of equipment near flammable materials, or burning of debris.

Climate Change

Climate change is likely to increase annual average maximum temperatures in Oakland from a historical 66 degrees Fahrenheit (°F), to 70°F by 2050 and 73.1°F by 2100.[27] This will likely create warmer temperatures earlier and later in the year. Precipitation levels are projected to increase slightly over the course of the century, changing from a historical annual average of 22.7 inches per year to an annual average of 25.4 inches by 2050 and an annual average of 28 inches by 2099.[28] Variations in precipitation patterns will also lead to an increase in the frequency and intensity of heavy precipitation events as well as prolonged periods of drought. The combination of extreme heat and droughts can cause soils and vegetation to dry out, creating more fuel for wildfires. These factors are expected to increase wildfire conditions, creating the risk of more frequent and intense wildfires. Because wildfires burn the trees and other vegetation that help stabilize a hillside and absorb water, more areas burned by fire may also lead to an increase in landslides and floods. Historically, an average of 391 acres burned annually in the city of Oakland.[29] Wildfires are projected to decrease to an annual average in the city of 371 acres burned by 2050 and decrease to an annual average of 350 acres burned by 2100.[30]

Fire Protection Services in the Project Area

The OFD has primary responsibility for preventing and suppressing fires in Oakland. In addition, the City has agreements with other local jurisdictions for cooperative response to fires, including Alameda and Contra Costa Counties, the East Bay Regional Parks District, and the cities of Alameda, Berkeley, Emeryville, Piedmont, and San Leandro. For example, Contra Costa County includes the Moraga-Orinda Fire District and Contra Costa County Fire Protection District that may respond to a fire in the project area because they are close by. OFD is a member of the Hills Emergency Forum, which is a coalition of government agencies and special districts coordinating information and management related to fire hazards in the Oakland Hills. OFD is also a member of the Diablo Fire Safe Council, which is a partnership among public- and private-sector organizations concerned with wildfire prevention in Alameda and Contra Costa Counties.[31]

[27] Cal-Adapt, 2022, "Annual Averages," https://cal-adapt.org/tools/annual-averages, accessed November 4, 2022.
[28] Cal-Adapt, 2022, "Annual Averages," https://cal-adapt.org/tools/annual-averages, accessed November 4, 2022.
[29] Cal-Adapt, 2022, "Wildfire," https://cal-adapt.org/tools/wildfire, accessed November 4, 2022.
[30] Cal-Adapt, 2022, "Wildfire," https://cal-adapt.org/tools/wildfire, accessed November 4, 2022.
[31] City of Oakland, November 2004, *City of Oakland General Plan, Safety Element*.

Evacuation and Access

Evacuation routes are designated roadways that allow many people to quickly leave an area in the case of a potential or imminent disaster. These routes should have sufficient capacity to accommodate the needs of the community, be safely and easily accessible, and allow people to travel far enough away to be safe from emergency conditions.

The primary evacuation route from the project site is Campus Drive, which connects to Redwood Road to the north and Keller Avenue to the south. OFD has three responding companies in the area to facilitate swift response in the event of an emergency. One of the companies would be able to respond from Skyline Boulevard above the project site, and the other two companies would respond from below the project site (Redwood Road/MacArthur Boulevard).

In addition, the City has launched a "Know Your Zone Campaign" to help residents and businesses be better prepared for the next evacuation or emergency through an online platform called ZoneHaven. During emergency events the Oakland Police Department and OFD coordinate the use of ZoneHaven to allow for quick and transparent evacuation decision-making that speeds up the evacuation notification process and to provide real time evacuation warnings and orders. The project site is in Zone OKL-E178. Residents of affected zones are alerted using a variety of means, including the county alert system (AC Alert), Nixle local alerts, social media such as Twitter and Facebook, and old-fashioned door-to-door warnings.

4.17.2 STANDARDS OF SIGNIFICANCE

According to the California Environmental Quality Act (CEQA) Guidelines Appendix G, *Environmental Checklist*, the proposed project would result in a significant wildfire impact if it would:

1. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Furthermore, if located in or near state responsibility areas or lands classified as very high fire severity zones, the proposed project would result in a significant wildfire impact if it would:

2. Substantially impair an adopted emergency response plan or emergency evacuation plan.
3. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
4. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
5. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.
6. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wildfire.

4.17.3 IMPACT DISCUSSION

WF-1 The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

As described in Section 4.17.1.2, *Existing Conditions*, the General Plan Safety Element identifies the Upper Hill planning area, which includes the project site, as an area exposed to wildfire hazards. CAL FIRE considers the site and surrounding area as a VHFHSZ. According to the OMC, the project site is in a WUI (urban development intermixed with wildland vegetation), and CAL FIRE describes the WUI on the site as an interface zone with the highest risk for wildfires affecting developed areas. Therefore, it is well established that the site and surrounding area are susceptible to wildfire.

The proposed project would be limited to the 2.6-acre development area that is bounded by existing single-family homes uphill (east) and downhill (west) as well as Campus Drive (north) and the project's 17.4 acres of proposed conservation open space (south). Due to the project's location, it would be subject to the requirements of the CBC, CFC, Fire Safe Regulations, and PRC Section 4291 described in Section 4.17.1.1, *Regulatory Framework*. As described in Section 3.4.1.7, *Wildfire Hazard Reduction Features*, in Chapter 3, *Project Description*, of this Draft EIR, the proposed project includes the following mandatory and voluntary features for wildland fire safety:

- Construction. Pursuant to Oakland SCA-47, *Designated Very High Fire Severity Zone—Vegetation Management*, the project would ensure fire safety prior to and during construction and prohibit smoking during construction. The project applicant would ensure that the project contractor cuts, rakes, and removes all combustible ground-level vegetation to a height of six feet or less from the construction, access, and staging areas to reduce the threat of fire ignition pursuant to CFC Sections 304.1.1 and 304.1.2. The project applicant would also require the construction contractor to implement spark arrestors on all nonelectric construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation, and require that these engines be maintained in effective working order to help prevent fire pursuant to SCA-47 and PRC Section 4442, which restricts the type of equipment that can be used on grass- or brush-covered areas of the site. Pursuant to CFC Section 906, during construction, the contractor would have a minimum of three type-2A10BC fire extinguishers on the job site, with current State Fire Marshal service tags attached, and these extinguishers would be deployed in the immediate presence of workers for use in the event of an ignition. The project applicant would require the construction contractor to implement a no-smoking policy on the site and surrounding area during construction, pursuant to CFC Section 310.8.[32]
- Roadways and Trails. The proposed new roadway's width of 34 feet and cul-de-sac diameter of 70 feet have been designed to satisfy the minimum City requirements, as described in City of Oakland Public

[32] City of Oakland, revised December 2020, *Standard Conditions of Approval*, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf, accessed October 6, 2022.

Works standards and the Oakland Fire Code (OMC Chapter 15.2). The proposed project's driveway and internal roadway are designed to current City standards and would accommodate the access requirements for both emergency and passenger vehicles. Sidewalks would be included on both sides of the proposed new street, and two unpaved pedestrian trails for fire evacuation would be to the east and west of the residential units, connecting to Campus Drive.

- **Building Materials.** All exterior building materials would be constructed to comply with the most recent wildland-urban interface building code (CBC Chapter 7A) as ignition resistant, with noncombustible materials, impregnable vents, and double-paned windows with one pane of tempered glass.
- **Fire Sprinklers and Alarms.** The proposed project would comply with the National Fire Protection Association's fire protection system and would include fire sprinkler and standpipe systems.[33] As shown on Figure 3-3, hydrants for fire protection would be provided in three locations along the proposed new street.
- **Vegetation Management of Developed Area.** The proposed project would conform to General Plan Policies CO-10.1, *Flammable Vegetation Control*, and CO-10.2, *Fire Prevention Measures*, which require controlling flammable vegetation and reducing fire hazards through a range of preventative measures for property in the Oakland Hills and in high wildfire hazard areas. Landscaping and site planning would minimize future wildfire hazards. Pursuant to PRC Section 4291, the project would develop and maintain defensible space from each side of a structure and maintain and space fuels so that wildfire burning under average weather conditions would be unlikely to ignite the structure; an ember-resistant zone for each structure; more intense fuel reduction between the fuel and the structure; trees, shrubs, and other plants adjacent or overhanging a building free of dead or dying wood; and the roof of structures free of leaves, needles, or other vegetative materials. CFC Chapter 49 requires clearance of debris and vegetation within a prescribed distance from occupied structures in WUI areas; the development and approval of a fire protection plan; and specific wildfire requirements for landscaping plans. Pursuant to Oakland SCA-47, *Designated Very High Fire Severity Zone—Vegetation Management*, the project would prepare a site-specific vegetation management plan (VMP) for the purpose of mitigating the adverse effects of wildfire hazards and submit it for City review and approval prior to approval of a construction-related permit.[34] As designed, the proposed project incorporates fire prevention recommendations set out by the City's SCAs that would enable the project to pass the mandatory annual Vegetation Management Inspection conducted by the OFD pursuant to City of Oakland Ordinance No. 11640. This includes minimum defensible space around all buildings and minimum setbacks from the street right-of-way. Defensible space requirements include clearing all hillsides of nonornamental vegetation within minimal distances from the residential structure, depending on the slope.[35]

[33] National Fire Prevention Association (NFPA) 13 Standard for the Installation Sprinkler Systems, 2016; NFPA 22 Standard for Water Tanks for Private Fire Protection, 2013; NFPA 24 Standard for the Installation of Private Service Mains, 2016.

[34] City of Oakland, revised December 2020, *Standard Conditions of Approval*, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf, accessed October 6, 2022.

[35] City of Oakland, revised December 2020, *Standard Conditions of Approval*, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf, accessed October 6, 2022.

- Evacuation. There are two evacuation routes for the proposed project, Campus Drive to Redwood Road, and Campus Drive to Keller Avenue. Campus Drive to Redwood Road (toward Merritt College) is a two- and four-lane roadway with sidewalks on both sides and some medians. Campus Drive to Keller Avenue is a two-lane road with sidewalks on both sides. Campus Drive is gradually sloped and does not contain sharp or narrow turns. The location of the project (at Campus Drive) allows for immediate ingress/egress to minimize increased evacuation time or emergency access response times.
- Other Fire Prevention Features. The City would require, through additional project-specific conditions of approval (COAs), that the future Homeowners Association (HOA) provide National Oceanic and Atmospheric Administration (NOAA) All Hazards Weather Radios to each new homeowner when they move in. The NOAA All Hazards Weather Radios operate on a nationwide network of radio stations broadcasting weather information 24 hours a day direct from nearby National Weather Service offices. The NOAA All Hazards Weather Radios are the fastest way to receive warnings of severe weather, including wildfire.

  The project COAs would also require the future HOA to provide each resident with an HOA packet that contains current information about evacuation preparedness and methods, and require residents to download the AC Alert emergency notification system and sign up for the ZoneHaven Aware application. The future HOA would hold annual wildfire and evacuation training for all residences in the proposed development.

  The future HOA would be responsible for the following in the common-use open space area:

  - Installing and maintaining signage throughout the common-use open space areas reminding residents and their visitors that smoking is prohibited on high fire danger (red flag) days.
  - Maintaining signage that littering in the common-use open space areas is prohibited and providing and maintaining trash cans and fireproof cigarette disposal receptacles throughout the common-use open space area to reduce litter.
  - Maintaining the landscaping in the common-use area to ensure there is no overgrowth of vegetation in this area.

  The future HOA would also include the following regulations to support the VMP:

  - Smoking is prohibited in the common-use open space areas on high fire danger (red flag) days.
  - Open-flame barbecues and grills are prohibited on high fire danger (red flag) days.
  - Storage under decks is not allowed.
  - Storage of mulch, leaves, and needles or wood from wall exteriors is not allowed.
  - Annual maintenance of roofs and gutters to keep them clear of fuel, such as leaves, needles, or dead wood, is required.
  - Immediate removal of dead plant and tree material is required.
  - Tree replacement shall ensure the canopy is no closer than 10 feet to the edge of a structure.
  - All homeowners must maintain landscaping on their property with electric landscaping equipment (i.e., no internal combustion engine using hydrocarbon fuels are permitted). All

landscaping firms hired by the HOA to maintain the common use open space must also use electric landscaping equipment.

- Prune trees up to 6 feet from the ground. For short trees, do not exceed one-third of the overall tree heights.
- No trees or ornamental vegetation are allowed within 5 feet of a structure.
- Space trees 18 feet between crowns if within 5 to 30 feet of a structure, 12 feet between crowns if within 30 to 60 feet, and 6 feet between crowns if within 60 to 100 feet.

As discussed in Chapter 4.3, *Biological Resources*, of this Draft EIR, the proposed development area provides suitable habitat for the San Francisco dusky-footed woodrat, which is considered a California Special Species of Concern by the California Department of Fish and Wildlife. Additionally, the conservation open space portion of the project site provides suitable essential habitat for the State and federally threatened Alameda whipsnake. Therefore, pursuant to SCA-47(a)(ix), the VMP shall implement Mitigation Measure BIO-1.3 to avoid inadvertent take of San Francisco dusky-footed woodrats on the project site. Similarly, the VMP would be required to implement Mitigation Measure BIO-1.4b, which provides for an Alameda Whipsnake Maintenance and Management Plan.

Furthermore, the proposed project would also be subject to annual inspections by the OFD to ensure compliance with the Oakland Fire Code and to identify and mitigate hazards that could contribute to the spread, growth, and intensity of wildfire.

Through compliance with State and local regulations described herein and the additional proposed fire prevention features, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fire, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant

WF-2 The proposed project would be in a Very High Fire Hazard Severity Zone, but it would not substantially impair an adopted emergency response plan or emergency evacuation plan.

The adopted City of Oakland EOP is the only emergency response plan for Oakland and is described under Section 4.17.1.1, *Regulatory Framework*. The City of Oakland's EOP provides a framework for the prevention, protection, response, and recovery of the City from emergencies.[36] In the event of an emergency, the City would activate personnel and mobilize response assets to support the incident response. During a wildfire the OFD would perform firefighting activities and urban search and rescue activities, and the Oakland Police Department would be responsible for conducting evacuations.

As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed project driveway would have direct access to a major collector road (Campus Drive) and would not rely on any local roads to transport

[36] City of Oakland, October 2021, *Emergency Operations Plan*, https://cao-94612.s3.amazonaws.com/documents/EOP-v4-Council-DRAFT_20211112.pdf, accessed October 18, 2022.

residents out of the area during an emergency. Major collector roads can serve relatively high traffic volumes and therefore would be able to accommodate the relatively low number of new vehicle trips added by the proposed project during an emergency. The location of the proposed project allows for immediate ingress/egress to minimize increased evacuation time or emergency access response times. Additionally, correspondence from OFD in July and December of 2019 confirmed that the proposed project would comply with OMC Chapter 15.12 for minimum road widths of 34 feet and a minimum cul-de-sac diameter of 70 feet.[37, 38]

Given that this area of the Oakland Hills is more recently developed with more gradual topography than others, OFD has opined that an additional ten homes would not result in an appreciable delay in response, unlike in other areas of the Oakland Hills, where the roads are more narrow, circuitous, and difficult to access, with fewer turnouts and intersections.[39] In contrast, the road infrastructure in this area of the project site is developed to more modern standards and has less dramatic topography, which would result in more efficient emergency response and evacuation. The project site is also close to both Interstate 580 and State Route 13, ensuring that evacuating cars have alternate travel routes of escape depending on the location of a fire or emergency. If the source of the emergency is from below the project site, residents can also access Skyline Boulevard by heading east.

OFD's determination that there would not be a significant response delay is further supported by the *Evacuation Time Estimate Effect Analysis* prepared by Fehr & Peers evaluating the increase in evacuation time the proposed project would add in the event that all residential and nonresidential land on Campus Drive would need to evacuate simultaneously (see Appendix I, *Transportation Impact Analysis*, of this Draft EIR).[40] This analysis assumes a baseline evacuation value of about 2,200 vehicles, where evacuating vehicles would go through the intersections of Campus Drive/Redwood Road and Campus Drive/Keller Avenue, and the proposed project would generate about 20 additional vehicles to the overall evacuating vehicles along Campus Drive. The analysis concludes that the "no project evacuation scenario" would be 62 minutes northbound to Redwood Road and 57.5 minutes southbound to Keller Avenue. The "plus project evacuation scenario" would result in a 1.5-minute increase in evacuation time (63.5 minutes) northbound to Redwood Road and 0.4-minute increase in evacuation time (57.9 minutes) southbound to Keller Avenue. The traffic signal cycle length at the intersection of Campus Drive/Redwood Road is about 100 seconds, and therefore the 1.5-minute increase would be less than one traffic signal cycle at the intersection.

Additionally, as described in Chapter 3, *Project Description*, of this Draft EIR and in Impact Discussion WF-1, the proposed project, through conditions of approval, would be required to ensure homeowners are educated on how to use ZoneHaven or its successor platform in the event of an emergency. Such information would be included in the HOA documents provided to each homeowner. The combined use of

[37] Phillip Basada (fire protection engineer), July 12, 2019, Email to Dr. Collin Mbanugo (project applicant), Oakland Fire Department.

[38] Dr. Collin Mbanugo (project applicant), December 17, 2019, Letter to Dara O'Bryne (Oakland city planner).

[39] The wildfire evacuation findings were developed and approved in coordination with the Oakland Fire Department, Planning Bureau, and City Attorney's Office.

[40] The wildfire evacuation findings were developed and approved in coordination with the Oakland Fire Department, Planning Bureau, and City Attorney's Office.

ZoneHaven and AC Alert services throughout the city would provide residents, students, and employees with evacuation warnings and orders, ultimately promoting a phased evacuation and reducing congestion along Campus Drive and the intersections of Campus Drive/Redwood Road and Campus Drive/Keller Avenue during a wildfire emergency.

Furthermore, the City of Oakland is currently updating the Safety Element of the General Plan to be consistent with Senate Bill 99 and Assembly Bill 747. Senate Bill 99 requires the identification of evacuation-constrained residential parcels that are in at least one hazard-prone area. Assembly Bill 747 requires safety elements to include the identification of evacuation routes; their capacity, safety, and viability; and evacuation locations under a range of emergency scenarios. These analyses will enable the City to increase the efficiency of evacuation throughout the city.

Emergency response and evacuation could be hindered by construction activities. However, all construction staging would be on-site and would not block Campus Drive. During the construction period, there would be no permanent on-site population; thus, the proposed project would not impede emergency access to or evacuation from the surrounding community.

Therefore, for the reasons discussed in this section, construction, and operation of the proposed project would not impair an emergency response plan or evacuation plan, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

WF-3	**The proposed project would be in a Very High Fire Hazard Severity Zone, but due to slope, prevailing winds, and other project-specific amenities it would not exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.**

As discussed in Section 4.17.1.2, *Existing Conditions*, the project site and surrounding area are on steep slopes, experience the prevailing Diablo winds, and have other factors that contribute to fire risk, such as highly flammable fuel. The project site is steeply sloped, with approximately 320 feet in elevation between the southern and northern portions of the site, generally sloping downward to the southwest. The Oakland Hills are prone to north and northeasterly Diablo Winds that are erratic in movement and have high speeds. These winds are often accompanied by low humidity and can shift suddenly due to temperature changes and interactions with steep slopes. This creates dangerous conditions by drying out vegetation and enabling a wildfire to spread more quickly. Other factors, such as vegetation on the project site, have the potential to exacerbate wildfire risks. The grassland, brush, and woodland areas on the project site can be easily ignited, especially during summer and fall when temperatures are high, relative humidity is low, and wind speeds can be high. During these conditions, woodlands and brush vegetation can dry out, particularly in areas with unirrigated vegetation, becoming extremely flammable and increasing wildfire risks.

WILDFIRE

Under current conditions, due to the slope, prevailing winds, and high fuel factors, wildfires and associated smoke could potentially travel up slope and expose existing residents in the project area—specifically those to the east and west of the project site—to the uncontrolled spread of wildfire or pollutant concentrations. Though the proposed project would include the construction and operation of ten new single-family homes, it would not exacerbate wildfire risks. As described in Chapter 3, *Project Description,* of this Draft EIR, the proposed project would require grading of the steep slope on part of the project site for the construction of the proposed Viewcrest Lane as well as placement of the residential units into the hillside on either side of the street. The grading and development can serve as a fire break when compared to existing conditions but also add new buildings that can burn. The proposed project would eliminate much of the existing highly flammable vegetation on the project site, replace it with irrigated landscaping that would be maintained on a regular basis to prevent overgrowth, and maintain defensible space between the proposed new homes and the existing surrounding development. These project features are described in Chapter 3 and in Impact Discussion WF-1.

The proposed project includes mandatory and voluntary features for wildland fire safety that comply with the CBC, CFC, Fire Safe Regulations, PRC Section 4291, OMC grading requirements, and the Oakland SCAs, which include standards to minimize the ignition and spread of wildfires due to slopes, winds, and other factors. SCA-47, *Designated Very High Fire Severity Zone—Vegetation Management*, states that defensible space standards require the clearing of all hillsides of nonornamental vegetation. The 2019 Strategic Fire Plan for California, the Oakland HMP, Alameda County CWPP, and Oakland General Plan reduce wildfire hazards and respond to wildfire hazards on a statewide and local scale. In addition, the Bay Area Air Quality Management District provides air quality alerts and advisories as well as resources for an interactive online map to view current air quality conditions in the region. The Oakland HMP and Alameda County CWPP contain several vegetation management and fuel reduction projects to reduce the uncontrolled spread of wildfire due to vegetation. CBC Chapter 7A requires ignition-resistant materials, noncombustible materials, impregnable vents, and double-paned windows with one pane of tempered glass for new developments in an FHSZ. Fire safety requirements of the CFC include clearance of debris and vegetation within 100 feet of a structure, an ember-resistant zone within 5 feet of a structure, and overall maintenance of structures to reduce the uncontrolled spread of fires.

PRC Section 4291 requires that brush, flammable vegetation, or combustible growth within 100 feet be removed around all buildings on or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land covered in flammable materials. Oakland's Vegetation Inspection Program would conduct an annual inspection of the proposed project to ensure compliance with the Oakland Fire Code, including the development of a vegetation buffers from structures, clearance of tree canopies adjacent to structures, and clearance on either side of a street right-of-way. Adherence to the state and local regulations would minimize the risk of ignition and spread of wildfires due to vegetation, therefore reducing the potential for exacerbating wildfire risks.

The proposed project would not create steeper slopes through grading, nor would the proposed development modify the existing prevailing winds. The proposed project would reduce the highly flammable vegetation on the overall 20-acre project site by installing native and fire-resistant and irrigated landscaping. The proposed structures would be built according to code with ignition-resistant materials, which would make them less prone to exacerbate the current wildfire risks than the existing homes in the area, which were built prior to the current, stricter building codes for development in high-fire hazard

zones. Through compliance with regulatory requirements for Fire Safe building and landscaping design, the proposed project would be built to protect the future residents of the site and minimize risk to the surrounding properties. The site would be more fire resistant than existing conditions. Therefore, wildfire risks would not be exacerbated due to slope, prevailing winds, or vegetation, and impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

WF-4	**The proposed project would be located in the Very High Fire Hazard Severity Zone, but would not require the installation or maintenance of a significant amount of associated infrastructure (such as lengthy roads, fuel breaks, emergency water sources, above-ground power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.**

The proposed project would include construction and ongoing maintenance of infrastructure on the 2.6-acre development area to support the residential development, including a new paved street, unpaved pedestrian trails, utility connections, and irrigated landscaping around the homes and in the common use open space. The proposed project would also maintain routine clearing of highly flammable nonnative vegetation in the proposed 17.4-acre proposed conservation open space area. Based on the analysis in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, the proposed project would not result in the need for expanded utility infrastructure off-site (i.e., no new power lines or other utilities). As described in Chapter 3, *Project Description*, of this Draft EIR, all new utilities would be underground. This is consistent with the requirements of SCA-83, *Underground Utilities*. Accordingly, the proposed project would not require the installation of off-site roads, fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, this impact discussion is focused on whether wildfire risk would be exacerbated due to the installation and routine maintenance of associated infrastructure development on the project site.

Development of the proposed project would result in the installation and maintenance of a new paved road (Viewcrest Lane) and associated sidewalks and two unpaved pedestrian trails for fire evacuation; new undergrounded utilities for water, wastewater, and power; and landscaping and defensible space. Sidewalks would be included on both sides of the street, and fire evacuation pedestrian trails would be to the east and west of the residential units, connecting to Campus Drive. The new paved road would be a residential cul-de-sac, extending roughly 600 feet from the existing Campus Drive.

As described in Impact Discussion WF-1, pursuant to Oakland SCA-47, *Designated Very High Fire Severity Zone—Vegetation Management*, the project would ensure fire safety prior to and during construction (installation) and prohibit smoking during construction. The project applicant would ensure that the project contractor cuts, rakes, and removes all combustible ground-level vegetation to a height of six feet or less in the construction, access, and staging areas to reduce the threat of fire ignition pursuant to CFC Sections 304.1.1 and 304.1.2. The project applicant would also require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Pursuant to CFC Section 906, during construction

the contractor would have a minimum of three type-2A10BC fire extinguishers on the job site with current State Fire Marshal service tags attached, and these extinguishers would be deployed in the immediate presence of workers for use in the event of an ignition. The project applicant would require the construction contractor to implement a no-smoking policy on the site and surrounding area during construction, pursuant to CFC Section 310.8.[41] These measures would ensure that the installation of these features would not exacerbate fire risk during construction. With respect to the installation of the project infrastructure resulting in other temporary or ongoing impacts to the environment, please see the other chapters of this Draft EIR. Specifically, for potential environmental impacts associated with future construction on the project site, including roadway, pedestrian paths, landscaping, defensible space, and utility connections, see Chapter 4.2, *Air Quality;* Chapter 4.3, *Biological Resources;* Chapter 4.5, *Energy;* Chapter 4.7, *Greenhouse Gas Emissions;* Chapter 4.11, *Noise*; and Chapter 4.15, *Transportation*.

The ongoing maintenance of these project features, including occasional repaving of the new street and repairing potholes and utility lines, would be on a smaller scale than the initial installation/construction of the proposed project and required to follow similar protocol to comply with PRC Section 4442, which restricts the type of equipment that can be used on grass- or brush-covered areas of the site to those with hydrocarbon fuels equipped with spark arresters, and that these engines must be maintained in effective working order to help prevent fire. Additionally, the Fire Safe Regulations require that buildings be set back from the center of the roadway by 30 feet, and with defensible space requirements, this would further minimize the risk of wildfire on the project site from the ongoing maintenance of the project infrastructure. The sweeping of the sidewalks or crack repair and potentially adding decomposed granite or other nonpaved trail materials to the proposed nonpaved trails can be done without motorized equipment that would exacerbate wildfire risk.

The landscaping and defensible space would be maintained with equipment that complies with PRC Section 4442 to help prevent fire. Further, as described in Chapter 3, *Project Description*, of this Draft EIR, all homeowners must maintain landscaping on their property with electric landscaping equipment (i.e., no internal combustion engines using hydrocarbon fuels are permitted). All landscaping firms hired by the HOA to maintain the common use open space must also use electric landscaping equipment. The ongoing maintenance of the 17.4 acres of conservation open space is required to be done by hand pursuant to Mitigation Measure BIO-1.4.a.

For the reasons provided in this discussion, the installation and maintenance of the new project infrastructure, landscaping, and defensible space would not exacerbate wildfire risks, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

[41] City of Oakland, revised December 2020, *Standard Conditions of Approval*, https://cao-94612.s3.amazonaws.com/documents/Standard-Conditions-of-Approval-December-2020.pdf, accessed October 6, 2022.

WF-5 The proposed project would be in a Very High Fire Hazard Severity Zone, but it would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Wildfires on hillsides can result in secondary hazards in the form of flooding and landslides that are primarily triggered by rainfall. On a burned hillside, without the vegetation that normally captures and stores water, rainfall would result in increased runoff, causing drainage areas to potentially flood much sooner and in greater volumes. Soils also have reduced infiltration capacity after moderate or severe wildfires and are more susceptible to erosion. Post-fire debris flows typically occur during the first post-fire storm season and rarely occur beyond the second rainy season. Post-fire debris flows are primarily due to surface erosion caused by rainfall runoff. Landslides caused by rainfall seeping into the ground are much less common.

As discussed in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, the project site is not within a FEMA-designated 100-year flood zone. As discussed in Chapter 4.6, *Geology and Soils*, of this Draft EIR, the project site is in a landslide-susceptible area with slopes ranging from 2.7:1 (horizontal:vertical) to 1.8:1. The proposed project would involve development of ten single-family detached homes built into the hillside with retaining walls to support cut-and-fill sections. The probability of the project site triggering debris flows or flooding downslope or downstream is negligible because, with the proposed construction, there are no long steep stretches of bare ground that could trigger these events.

Although it is possible that the proposed 17.4 acres of conservation open space, which would remain in its natural condition, could result in downslope debris flows or flooding with post-fire conditions, this is unlikely because there are no chutes, deeply incised drainage channels, or long steep unvegetated slopes that are conducive to debris flows on the lower portion of the project site. In addition, downstream of the project site, the slopes have drainage swales and erosion control measures to minimize potential impacts due to slope instability.

The United States Geological Survey conducts post-fire debris flow hazard assessments for fires in the western United States.[42] Based on a review of recent fires in northern California, it appears that the project site and surrounding area would have a low probability of a debris flow because the area lacks substantially steep topography and incised drainages The United States Geological Survey and NOAA have established a flash-flood and debris-flow early warning system for recently burned areas. The agencies identify when both flash floods and debris flows are likely and issue advisory outlooks, watches, and warnings to emergency personnel through the National Weather Service Advanced Weather Information Processing System.[43]This would provide advanced warning to Alameda County emergency personnel in the event of a wildfire and subsequent storm that could result in debris flows or flash flooding at the site and surrounding area.

[42] United States Geological Survey, 2023, USGS Post Wildfire Debris Flow Hazard Assessment Viewer, https://usgs.maps.arcgis.com/apps/dashboards/c09fa874362e48a9afe79432f2efe6fe, accessed on April 19, 2023.

[43] United States Geological Survey, 2023, Early Warning System, https://www.usgs.gov/programs/landslide-hazards/science/early-warning-system accessed on April 19, 2023.

WILDFIRE

As described in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, during construction, enforcement of the SWRCB's Construction General Permit regulations, including implementation of best management practices (BMP), would minimize erosion and control runoff. BMPs would include silt fences surrounding the project site, fiber rolls to stabilize slopes, covering stockpiles and construction materials, installing inlet filters on all catch basins, and constructing a stabilized construction entrance/exit. The erosion control plan and BMPs are shown on Figure 4.9-1, *Erosion Control Plan,* in Chapter 4.9. Development of the project site would not involve the alteration of any natural drainage channel or watercourse. The project site design includes bioretention areas that would act as treatment areas and detention ponds for stormwater prior to discharge to the existing storm drain system that is aligned beneath Chamberlin Court. Therefore, as concluded in Chapter 4.9, the proposed project would not increase stormwater runoff or change drainage patterns in a manner that would impact downslope or downstream properties.

The proposed project would also be required to comply with OMC Section 15.04.3.2.065 and utilize the appropriate grading and drainage methods for hillside development. This section requires the applicant to submit a grading plan, erosion and sediment control plan, and drainage plan to obtain a grading permit prior to construction. Additionally, the project applicant would be required to submit a site-specific geotechnical report prepared by a registered geotechnical engineer for City review and approval, pursuant to SCA-39, *Seismic Hazard Zones*. The report would contain, at a minimum, a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant must implement the recommendations in the approved report during project design and construction. Implementation of the requirements of OMC and SCA-39 would reduce potential for slope instability landslide movement.

Furthermore, as discussed in Impact Discussion WF-2, the proposed project would be required to comply with Fire Safe Regulations, PRC Section 4291, the CBC, the CFC, and the Oakland SCAs. These regulations would ensure fire and landslide resilient construction, and therefore would reduce the potential for post-wildfire flooding or landslides downstream or downslope.

Management of stormwater and erosion controls during construction and operation would prevent downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Compliance with the requirements of OMC and SCA-39, *Seismic Hazard Zones*, as well as other State and local regulations addressing wildfire prevention would reduce minimize risks of post-wildfire hazards. The implementation of the Oakland HMP and Alameda County CWPP would further reduce wildfire risks. Therefore, the proposed project would not expose people or structures to significant risks related to runoff, slope instability, or drainage changes, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

WF-6	**The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wildfire.**

The analysis of cumulative wildfire impacts is based on impacts of the proposed project plus cumulative development within and near the VHFHSZ. Future projects proposed within the VHFHSZ could subject people and structures to wildfire hazards. As discussed previously, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires; would not interfere with implementation of emergency response or evacuation plans; would not exacerbate wildfire risks exposing project occupants to pollutant concentrations or the uncontrolled spread of wildfire; would not exacerbate fire risks or result in temporary or ongoing impacts to the environment due to the installation or maintenance of infrastructure; and would not expose people or structures to significant risks as a results of runoff, post-fire slope instability, or drainage changes.

The addition of other proposed development projects in adjacent areas would have the potential to contribute to cumulative wildfire risks. However, future development in the city and the VHFHSZ would be subject to the same federal, State, and local regulations, including the Fire Safe Regulations, the CBC, the CFC, PRC Section 4291, the OMC, the Oakland General Plan, and the Oakland SCAs. New development would be required to undergo separate CEQA review and identify wildfire impacts and appropriate mitigation measures. Therefore, cumulative wildfire impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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5. Alternatives to the Proposed Project

The CEQA Guidelines set forth the intent and extent of alternatives analysis to be provided in an EIR. Section 15126.6(a) of the CEQA Guidelines states that:

> An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

The following discussion is intended to inform the public and decision makers of feasible alternatives to the proposed project that would avoid or substantially lessen any significant effects of the proposed project. This chapter describes the purpose of the alternative's discussion; provides a summary of the reasonable range of alternatives, including a summary of potentially significant impacts and the relationship of each alternative to the project objectives; and identifies the environmentally superior alternative.

5.1 PURPOSE

The alternatives evaluated in this Draft EIR were developed consistent with Section 15126.6(b) of the CEQA Guidelines, which states that:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

5.2 POTENTIALLY SIGNIFICANT IMPACTS

All of the potential environmental impacts associated with development of the proposed project were found to be less than significant without mitigation or less than significant with mitigation. A list of the potential impacts is provided in Table 2-1, *Summary of Significant Impacts With Standard Conditions of Approvals and Mitigation Measures,* and Table 2-2, *Summary of Less Than Significant Impacts With*

Standard Conditions of Approval, in Chapter 2, *Executive Summary*, of this Draft EIR. The choice of alternatives to the proposed project is focused on alternatives that would further reduce or avoid the impacts found to be potentially significant, but less than significant with mitigation measures. The significant-but-mitigable impacts of the proposed project are:

- Impact BIO-1.1: Project site preparation (clearing and grading) during the construction phase on the proposed 2.6-acre development area and on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) would adversely affect the occurrences of Oakland star tulip.
- Impact BIO-1.2: Removal of trees during project construction or as part of future fire fuel management activities on the proposed 2.6-acre development area and on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) may result in the inadvertent destruction of active bat roosts.
- Impact BIO-1.3: Removal of trees and dense vegetative cover during project construction or as part of future fire fuel management activities on the proposed 2.6-acre development area and on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) may result in the inadvertent destruction of active nests of San Francisco dusky-footed woodrat.
- Impact BIO-1.4a: Removal of vegetative cover and other construction activities could result in the inadvertent take of Alameda whipsnake in the remote instance that an individual snake were to disperse into the proposed development area.
- Impact BIO-1.4b: Future fire fuel management activities on the proposed 17.4-acre conservation open space area from implementation of the Vegetation Management Plan pursuant to Oakland Standard Condition of Approval 47(a)(ix) has the potential to result in the inadvertent take of the Alameda whipsnake.
- Impact HYD-1: Uncontrolled erosion and sedimentation could have negative effects on water quality.
- Impact NOI-8: The proposed project could result in the generation of excessive groundborne vibration in the vicinity of the project during the construction phase that would be in excess of established thresholds.

5.3 PROJECT OBJECTIVES

As stated above, the range of alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the proposed project. The proposed project objectives are as follows:

- Provide a housing project that results in the fewest environmental impacts while adding the maximum needed housing to the City's housing supply.
- Provide an architecturally distinctive housing project that will contribute positively to the residential character of this area of the Oakland Hills.

- Cluster housing on approximately 2.6 acres off Campus Drive to preserve and maintain the remaining 17.4 acres of the project site as open space to be held in perpetuity to balance the preservation of existing vegetation and wildlife habitat with wildfire prevention.
- Provide features to support or exceed the City's sustainability goals by using only LED light sources, and landscape with native and/or adaptive and drought-resistant plant materials.
- Create a project that addresses wildfire risks and minimizes impacts to wildfire ignition, emergency access, and evacuation and is in a location near existing ingress/egress to minimize increased evacuation time or emergency access response times.

5.4 SELECTION OF A REASONABLE RANGE OF ALTERNATIVES

Section 15126.6(c) of the State CEQA Guidelines states:

> The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

5.4.1 ALTERNATIVES CONSIDERED AND REJECTED AS INFEASIBLE

As described above, Section 15126.6(c) of the State CEQA Guidelines requires EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process, and briefly explain the reasons underlying the lead agency's determination. The following is a discussion of alternatives that were considered and rejected, along with the reasons they were not included in the analysis.

5.4.1.1 ALTERNATIVE LOCATION

The project applicant owns two potential alternative sites for the proposed project, both zoned for residential. Both sites were initially considered potentially feasible alternatives, but based on the analysis provided below, they were concluded to be infeasible.

The first potential alternative site is a 100-acre adjacent parcel north of the State Route 13 and Interstate 580 juncture, assigned Assessor's Parcel Number (APN) 37A-3151-2-8. While the size of this potential alternative site could allow for the proposed project as designed, the site has accessibility issues due to the steep hillsides and general geologic instability due to the existence of underground mining tunnels from the former Leona sulfur mines. Additionally, as part of the cleanup of the Leona sulfur mines, the property was deed restricted, preventing any development on this site without a major cleanup to make the site safe for development. Given the probable geologic and hazardous impacts, the deed restriction,

and the costs of cleaning up the site to make it safe for development, the proposed project at this potential alternative site is deemed infeasible and would not be an environmentally superior alternative to the current project site.

The second potential alternative site is a 20-acre parcel north of Interstate 580 and south of Campus Drive assigned APN 37A-3152-14. This potential alternative site is land locked, with no available ingress or egress. According to the Oakland Fire Code (Oakland Municipal Code Chapter 15.12), the only acceptable mitigation for a dead-end street over 600 feet, as designed in the proposed project, is a secondary means of access. Fire sprinklers, vegetation management, extra fire hydrants, turn-out lanes, and fire-resistant buildings are not considered acceptable mitigation for the lack of a secondary access road. Therefore, development of the proposed project on this potential alternative site would require two separate easements for access since the closest path with no structure is over 600 feet in length from the site. For these reasons, the proposed project at this potential alternative site is deemed infeasible and would not be an environmentally superior alternative to the current project site.

5.4.1.2 20-UNIT TOWNHOME INCREASED DENSITY ALTERNATIVE

As described in Chapter 3, *Project Description*, of this Draft EIR, the project as originally proposed included the construction and occupancy of 20 single-family attached townhomes. The original project was proposed on the same 2.6-acre development area as the proposed project and would also provide a 17.4-acre conservation open space area in perpetuity. The proposed 20 units would be accessed from Campus Drive via a new residential street (Viewcrest Lane), the same as the proposed project. However, this project was deemed to be infeasible because it would exceed the City's threshold for vehicle miles traveled (VMT) and therefore would have significant and unavoidable impacts related to VMT—there would be no mitigation available to reduce VMT due to the type of private residential development and the location of the proposed project. Further, because VMT standards are directly linked to meeting GHG emission reductions, the original 20-unit proposal would not align with the goals of the City's 2030 Equitable Climate Action Plan nor with the Metropolitan Transportation Commission's/Association of Bay Area Governments' *Plan Bay Area 2050*, which provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of Senate Bill 375. The 20-unit alternative would add more units and more residents on a greater footprint within the 2.6-acre project area, which would not minimize risk of wildfire as well as the ten-unit project. For these reasons, the original 20-unit proposal alternative is deemed infeasible and would not be an environmentally superior alternative to the proposed project.

5.4.1.3 EMERGENCY VEHICLE/TWO ACCESS ALTERNATIVE

Although not required due to the length of the proposed new roadway (Viewcrest Lane) at roughly 600 feet, an alternative with two access points was considered. This alternative considered constructing an emergency access road for access to and from the project site for emergency vehicles and evacuation by future residents of the project and neighboring residents. The emergency access route was considered to go through the proposed 17.4-acre conservation open space area to connect with Viewcrest Court or Ridgemont Drive. However, building an emergency access road would be infeasible due to the terrain of the project site. Additionally, development of a roadway on this portion of the project site would result in the permanent loss of critical habitat for numerous special-status species. When compared to the

proposed project, this alternative would increase construction activities, paved surfaces and subsequent stormwater runoff, and impacts associated with soil instability. For these reasons, the two-access alternative is deemed infeasible and would not be an environmentally superior alternative to the proposed project.

5.4.1.4 REDUCED HOUSING ALTERNATIVE

California's Housing Accountability Act was passed in 1982 and has been revised in a number of recent years. Under the Housing Accountability Act, so long as a project complies with applicable objective General Plan and zoning standards, a local agency may deny a project or approve it at a lower density only if the agency makes written findings that the project would have specific, adverse, unavoidable impacts on public health or safety. With the project approvals sought by the proposed project and required through the mitigation measures in this Draft EIR, the proposed project would adhere to applicable objective standards. The proposed project would not result in an unavoidable impact on public health and safety. Therefore, the City is precluded from approving a project alternative with a lower density than proposed. CEQA does not require an evaluation of infeasible alternatives (*Tiburon Open Space Committee, et al. v. County of Marin*, No. A159860), and therefore any alternatives that involve a reduced number of housing units are rejected from evaluation in this chapter.

5.4.2 ALTERNATIVES ANALYSIS

In accordance with the CEQA Guidelines, in addition to the No Project Alternative, this EIR discusses one additional project alternative and compares the alternatives to the proposed project. As previously stated, the alternatives were selected because of their potential to reduce the significant-but-mitigable impacts of the proposed project related to biological resources. The alternatives include:

- No Project Alternative. This alternative assumes that the proposed project would not be approved and that no development or any other changes to the project site would occur.
- Alternate Site Plan. This alternative would avoid developing housing in some of the areas where occurrences of Oakland star tulip have been identified. In doing so, the single-family unit (#6) would be relocated from the east side of the proposed Viewcrest Lane to the west side, just north of unit #1. It is assumed that mitigation measures identified for the proposed project would also apply under this alternative.

The following analysis compares the potentially significant environmental impacts of the two alternatives with those of the project for each of the environmental topics analyzed in detail in Chapters 4.1 through 4.17 of this Draft EIR. The impacts of each alternative are classified as greater, reduced, or essentially similar to (or comparable to) the level of impacts associated with the proposed project. Table 5-1, *Comparison of Impacts from Project Alternatives and the Proposed Project*, summarizes the relative impacts of each of the alternatives compared to the proposed project.

TABLE 5-1 COMPARISON OF IMPACTS FROM PROJECT ALTERNATIVES AND THE PROPOSED PROJECT

Topic	Proposed Project	No Project Alternative	Alternate Site Plan
Aesthetics	LTS	<	=
Air Quality	LTS	<	=
Biological Resources	LTS/M	<	<
Cultural and Tribal Cultural Resources	LTS	<	=
Energy	LTS	<	=
Geology and Soils	LTS	<	=
Greenhouse Gas Emissions	LTS	<	=
Hazards and Hazardous Materials	LTS	<	=
Hydrology and Water Quality	LTS/M	<	=
Land Use and Planning	LTS	>	=
Noise and Vibration	LTS/M	<	=
Population and Housing	LTS	=	=
Public Services	LTS	<	=
Recreation	LTS	<	=
Transportation	LTS	<	=
Utilities and Service Systems	LTS	<	=
Wildfire	LTS	<	=

Notes:
LTS Less Than Significant
LTS/M Less Than Significant with Mitigation
< Less or reduced impacts in comparison to the proposed project
= Similar impacts in comparison to the proposed project
> Greater impacts in comparison to the proposed project

5.5 NO PROJECT ALTERNATIVE

5.5.1 DESCRIPTION

Pursuant to CEQA Guidelines Section 15126.6(e), the No Project Alternative is required as part of the "reasonable range of alternatives" to allow decision makers to compare the impacts of approving the proposed project with the impacts of taking no action or not approving the proposed project. Under this alternative, the proposed project would not be constructed, and the project site would remain in its current condition as undeveloped.

5.5.2 IMPACT DISCUSSION

The potential environmental impacts associated with the No Project Alternative when compared to the proposed project are described below.

5.5.2.1 AESTHETICS

The aesthetic impacts of the proposed project would be less than significant. The No Project Alternative would not result in a change in the existing aesthetic characteristics of the site. The No Project Alternative would not introduce new landscaping or structures that could create shadows that would impair beneficial uses of solar collectors and historic resources, wind, and it would not have the need for an

exception to the regulations of the Oakland General Plan, Oakland Planning Code, or Uniform Building Code. The No Project Alternative would not develop new residences in the Oakland Hills and thus would not have an effect on public scenic vistas or scenic highways, degrade the existing character, or create new sources of light or glare. Due to the absence of development under the No Project Alternative, aesthetics-related impacts would be less when compared to the proposed project.

5.5.2.2 AIR QUALITY

The operational impacts related to air quality under the proposed project would be less than significant, as would be the temporary construction-related air quality impacts of the proposed project. Like the proposed project, the No Project Alternative would not exceed the City's thresholds for criteria pollutant emissions and precursors, contribute carbon monoxide (CO) concentrations that would exceed the California Ambient Air Quality Standards, or expose sensitive receptors to toxic air contaminants or substantial objectionable odors. However, under the No Project Alternative, construction emissions from exhaust and fugitive dust would not occur, and there would be no increase of toxic air contaminants. Therefore, overall air quality impacts of the No Project Alternative would be reduced when compared to the proposed project.

5.5.2.3 BIOLOGICAL RESOURCES

The biological resources impacts of the proposed project are fully mitigable with implementation of Mitigation Measures BIO-1.1 through BIO-1.4. The No Project Alternative would not result in any changes to the existing conditions, and therefore, similar to the proposed project, would not have a substantial adverse effect on riparian habitats, sensitive natural communities, or wetlands; interfere with movement of native resident or migratory wildlife or their nursery sites; or conflict with any habitat conservation plans or City ordinances. However, under the No Project Alternative, the habitat for any special-status species identified would not be modified, thus eliminating the proposed project's significant-but-mitigable adverse effects on special-status species. Therefore, impacts to biological resources from the No Project Alternative would be reduced when compared to the proposed project because no development on the project site would occur.

5.5.2.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

The cultural and tribal cultural resources impacts under the proposed project would be less than significant. Because the No Project Alternative would not result in development on the project site, there would be no potential to impact historical, archeological, paleontological, or tribal cultural resources, nor would there be the potential to damage a unique geologic features or human remains on the project site. Accordingly, the No Project Alternative would result in reduced impacts when compared to the proposed project.

5.5.2.5 ENERGY

The impacts related to energy of the proposed project would be less than significant. Like the proposed project, the No Project Alternative would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. However, unlike the proposed project, the No Project Alternative would not

develop the project site, and new structures would not be constructed, eliminating the temporary energy needs from construction. There would be no increase in operational demand for energy or need for the energy provider to serve additional demand. Therefore, the energy impacts of the No Project Alternative would be reduced when compared to the proposed project.

5.5.2.6 GEOLOGY AND SOILS

The geology and soils impacts of the proposed project would be less than significant. Under the No Project Alternative, no new development would occur on the site, which reduces the potential exposure of people or structure to substantial risk related to fault rupture, strong seismic ground shaking, liquefaction, or landslides. Ground-disturbing activities would not occur, and there would be no substantial soil erosion or loss of topsoil or development on expansive soil. There would be no development above a known well, pit, swamp, mount, tank vault, unmarked sewer line, or landfill and no need for soils to support alternative wastewater disposal systems. Therefore, the impacts of the No Project Alternative related to geology and soils would be reduced when compared to the proposed project.

5.5.2.7 GREENHOUSE GAS EMISSIONS

The impacts related to greenhouse gas (GHG) emissions of the proposed project would be less than significant. Like the proposed project, the No Project Alternative would not involve a stationary GHG emissions source. However, under the No Project Alternative, the project site would not be developed, and there would be no potential to conflict with the Oakland 2030 Equitable Climate Action Plan or any other applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, the GHG emission related impacts of the No Project Alternative would be reduced when compared to the proposed project.

5.5.2.8 HAZARDS AND HAZARDOUS MATERIALS

The impacts related to hazards and hazardous materials from construction and operation of the proposed project would be less than significant. Like the proposed project, the No Project Alternative would not be on a site which is included on a list of hazardous materials sites, result in the inclusion of less than two emergency access routes for streets exceeding 600 feet in in length, and would not be within an airport land use plan or within the vicinity of a private airstrip. However, unlike the proposed project, the No Project Alternative would not involve construction or operation that would have the potential to create a significant hazard through routine transport, use, or disposal of hazardous materials; accidental release of hazardous materials; or storage or use of acutely hazardous materials near sensitive receptors. Therefore, impacts of the No Project Alternative related to hazards and hazardous materials would be reduced when compared to the proposed project.

5.5.2.9 HYDROLOGY AND WATER QUALITY

The impacts related to hydrology and water standards from construction and operation of the proposed project would be less than significant with mitigation. Like the proposed project, the No Project Alternative would not place housing within a 100-year flood hazard area or result in a substantial risk

related to flooding. However, the No Project Alternative would not involve construction or operation that would violate water quality standards of waste discharge requirements; deplete groundwater supplies or interfere with recharge; result in erosion, siltation, or flooding; create or contribute to runoff; degrade water quality; risk mudflow; substantially alter the existing drainage pattern of the project site; or conflict with the City of Oakland Creek Protection Ordinance. Therefore, impacts of the No Project Alternative related to hydrology and water quality would be reduced when compared to the proposed project.

5.5.2.10 LAND USE AND PLANNING

The land use impacts of the proposed project would be less than significant. Like the proposed project, the No Project Alternative would not conflict with any conservation plans related to habitats or natural community, as the project site is not within the boundary of any such plan areas, nor would the No Project Alternative physically divide an existing community. Under the No Project Alternative, the project site would not be developed and thus, any potential for fundamental conflict between nearby land uses or conflict with any applicable land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect would not occur. The No Project Alternative would not develop ten single-family homes, thus contributing to the housing stock in Oakland. The No Project Alternative would also not preserve the conservation open space in perpetuity, which is a land use adopted for the purposes of reducing impacts to biological resources. Because these actions are consistent with and help the City to meet the goals in the General Plan by building housing and introducing long-term protections for sensitive habitat, land use impacts of the No Project Alternative would be greater when compared to the proposed project.

5.5.2.11 NOISE

The operational impacts related to noise from the proposed project would be less than significant, and the construction impacts would be fully mitigable with implementation of Mitigation Measure NOI-8. Similar to the proposed project, the No Project Alternative would not generate operational noise in violation of State or City standards, nor would it result in a permanent increase in ambient noise levels. Under the No Project Alternative, no construction would occur, eliminating the proposed project's significant-but-mitigable effects related to exceedance of vibration thresholds from groundborne vibration during the construction phase. Therefore, noise impacts of the No Project alternative would be reduced compared to the proposed project.

5.5.2.12 POPULATION AND HOUSING

The population and housing impacts of the proposed project would be less than significant. Like the proposed project, the No Project Alternative would not directly or indirectly result in growth inducement, nor would it displace existing housing or people. Therefore, population and housing impacts of the No Project Alternative would be the same compared to the proposed project.

5.5.2.13 PUBLIC SERVICES

The impacts of the proposed project on all public services would be less than significant. The No Project Alternative would not develop the project site and not add any population to the area that would require

public services such as fire protection, police, schools, or libraries that would require new or expanded facilities. Therefore, impacts of the No Project Alternative would be reduced compared to the proposed project.

5.5.2.14 RECREATION

The impacts of the proposed project on recreational resources would be less than significant. The No Project Alternative would not develop the project site and not add any population to the area that would place additional demands on existing recreation facilities or require construction or expansion of recreational facilities. Therefore, impacts of the No Project Alternative would be reduced compared to the proposed project.

5.5.2.15 TRANSPORTATION

The transportation impacts of the proposed project would be less than significant. The proposed project would add a new street (Viewcrest Lane) and generate 94 net-new daily trips, none of which would occur under the No Project Alternative. Therefore, the No Project Alternative would not conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, cause substantial additional vehicle miles traveled, or substantially induce additional automobile travel by increasing physical roadway capacity. Accordingly, transportation impacts of the No Project Alternative would be reduced compared to the proposed project.

5.5.2.16 UTILITIES AND SERVICE SYSTEMS

The utilities and service systems impacts of the proposed project would be less than significant. Like the proposed project, the No Project Alternative would not violate applicable federal, state, and local statutes and regulations related to solid waste. However, unlike the proposed project, the No Project Alternative would not involve development at the project site and thus would not generate wastewater; exceed available water supplies; or require construction or expansion of wastewater, water, or landfill facilities. Accordingly, overall impacts to utilities and service systems would be reduced compared to the proposed project.

5.5.2.17 WILDFIRE

The wildfire impacts of the proposed project would be less than significant. Under the No Project Alternative, the project site would retain its existing conditions and development would not occur. Therefore, the No Project Alternative would not require installation or maintenance of associated infrastructure that would exacerbate wildfire risk. Additionally, the No Project Alternative would not expose people or structures to a significant risk of loss, injury, or death, or pollutant concentrations from wildfire or the spread of wildfire, nor would it impair an adopted emergency response plan or evacuation plan. Accordingly, overall impacts to wildfire for the No Project Alternative would be reduced compared to the proposed project.

5.5.3 RELATIONSHIP OF THE ALTERNATIVE TO THE OBJECTIVES

Under the No Project Alternative, the proposed project would not be constructed and therefore, this alternative would not accomplish any of the project objectives. Specifically, it would not provide much-needed housing to Oakland's housing supply that would result in the fewest environmental impacts.

5.6 ALTERNATE SITE PLAN

5.6.1 DESCRIPTION

The Alternate Site Plan would avoid developing housing in some of the areas where occurrences of Oakland star tulip have been identified. In doing so, one single-family unit (#6) would be relocated from the east side of the proposed Viewcrest Lane to the west side, just north of unit #1. It is assumed that mitigation measures identified for the proposed project would also apply to this alternative.

5.6.2 IMPACT DISCUSSION

The potential environmental impacts associated with the Alternate Site Plan when compared to the proposed project are described below.

5.6.2.1 AESTHETICS

The aesthetic impacts of the proposed project would be less than significant. Like the proposed project, the Alternate Site Plan would not create shadows that would impair beneficial uses of solar collectors and historic resources, be of sufficient height to result in the need for a wind impact study, nor would it require an exception to the regulations of the Oakland General Plan, Oakland Planning Code, or Uniform Building Code. Under the Alternate Site Plan, much of the project characteristics would remain the same, but the layout of the project would be modified to accommodate the relocation of unit #6. It is assumed that the overall design layout and building concepts (building styles and materials) would remain the same as the proposed project. Therefore, impacts of the Alternate Site Plan related to aesthetics would be similar in comparison to the proposed project.

5.6.2.2 AIR QUALITY

The temporary construction-related and operational air quality impacts of the proposed project would be less than significant. In comparison to the proposed project, the Alternate Site Plan would result in a similar amount of air emissions, as the same number of units would be construction and generate emissions from operation. Therefore, overall air quality impacts of the Alternate Site Plan would be similar when compared to the proposed project.

5.6.2.3 BIOLOGICAL RESOURCES

The biological resources impacts of the proposed project are fully mitigable with implementation of Mitigation Measures BIO-1.1 through and BIO-1.4. The Alternate Site Plan would relocate unit #6 from the east side of the proposed Viewcrest Lane to the west side, just north of unit #1, to avoid developing housing in some of the areas where occurrences of Oakland star tulip have been identified. However, development would still occur in other areas of Oakland star tulip occurrences. The Alternate Site Plan would be required to implement Mitigation Measure BIO-1.1 to address the loss of occurrences of Oakland star tulip, as well as other Mitigation Measures identified for the proposed project. Because this alternative would preserve additional habitat for the Oakland star tulip, impacts are considered slightly less in comparison to the proposed project.

5.6.2.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

The cultural and tribal cultural resources impacts under the proposed project would be less than significant. Like the proposed project, the Alternate Site Plan would have no impact on historical resources or known tribal cultural resources. Under the Alternate Site Plan, the development area would remain the same; therefore, the potential for the discovery of unknown archeological resources, paleontological resources, unique geologic features, human remains, or tribal cultural resources would remain the same. Impacts to cultural and tribal cultural resources under the Alternate Site Plan would be similar in comparison to the proposed project.

5.6.2.5 ENERGY

The impacts related to energy of the proposed project would be less than significant. In comparison to the proposed project, the Alternate Site Plan would use a similar amount of energy for construction and operation because the same number of units are being developed. Therefore, overall energy impacts of the Alternate Site Plan would be similar when compared to the proposed project.

5.6.2.6 GEOLOGY AND SOILS

The geology and soils impacts of the proposed project would be less than significant. Under the Alternate Site Plan, the project site location would not change. The project site is not within an earthquake fault zone or liquefaction hazard area. The Alternate Site Plan alternative would be required to comply with the same regulations as the proposed project to mitigate the hazards of ground shaking, landslides, soil erosion, and expansive soil. Like the proposed project, the Alternate Site Plan would have no impact on related to development located above a known well, pit, swamp, mount, tank vault, unmarked sewer line, or landfill and the need for soils that would need to support alternative wastewater disposal systems. Therefore, impacts of the Alternate Site Plan related to geology and soils would be similar in comparison to the proposed project.

5.6.2.7 GREENHOUSE GAS EMISSIONS

The impacts related to GHG emissions of the proposed project would be less than significant. In comparison to the proposed project, the Alternate Site Plan would generate a similar amount of

greenhouse gas emissions because the same number of units are being developed. Therefore, overall greenhouse gas emissions impacts of the Alternate Site Plan would be similar when compared to the proposed project.

5.6.2.8 HAZARDS AND HAZARDOUS MATERIALS

The impacts related to hazards and hazardous materials from construction and operation of the proposed project would be less than significant without mitigation. The Alternate Site Plan alternative would be required to comply with the same regulations as the proposed project to mitigate the hazards of routine transport, use, or disposal of hazardous materials, upset and accident conditions involving the release of hazardous materials, and storage or use of acutely hazardous materials, substances, or waste near sensitive receptors or schools. Like the proposed project, the Alternate Site Plan would not have an impact related to location on a site that is included on a list of hazardous materials sites, inclusion of less than two emergency access routes for streets exceeding 600 feet in in length, and location within an airport land use plan or within the vicinity of a private airstrip. Therefore, impacts of the Alternate Site Plan related to hazards and hazardous materials would be similar in comparison to the proposed project.

5.6.2.9 HYDROLOGY AND WATER QUALITY

The impacts related to hydrology and water standards from construction and operation of the proposed project would be less than significant with mitigation. The Alternate Site Plan would be designed to accommodate the same number of units as the proposed project on the same project site location. The Alternate Site Plan alternative would be required to comply with the same regulations and mitigation measure as the proposed project to avoid significant impacts to water quality, groundwater supplies or recharge, and stormwater drainage systems or facilities and to reduce hazards from liquefaction and/or slope stability. Like the proposed project, the Alternate Site Plan Alternative would not place housing within a 100-year flood hazard area or result in substantial risk related to flooding. Therefore, impacts of the Alternate Site Plan related to hydrology and water quality would be similar in comparison to the proposed project.

5.6.2.10 LAND USE AND PLANNING

The land use impacts of the proposed project would be less than significant. The Alternate Site Plan would be designed to accommodate the same number of units as the proposed project on the same project site location. Therefore, it would not divide and established community, result in fundamental conflict between nearby land uses, or conflict with any applicable land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect. Like the proposed project, the Alternate Site Plan Alternative would not conflict with any conservation plans related to habitats or natural community because the project site is not within the boundary of any such plan areas. Land use and planning impacts under the Alternate Site Plan would be similar in comparison to the proposed project.

5.6.2.11 NOISE

The operational impacts related to noise from the proposed project would be less than significant and the construction impacts fully mitigable with implementation of Mitigation Measure NOI-8. In comparison to

the proposed project, the Alternate Site Plan would generate a similar amount of noise and vibration because the same number of units are being developed. Therefore, overall noise and vibration impacts of the Alternate Site Plan would be similar when compared to the proposed project.

5.6.2.12 POPULATION AND HOUSING

The population and housing impacts of the proposed project would be less than significant. The Alternate Site Plan would be designed to accommodate the same number of units as the proposed project on the same project site location. Therefore, the Alternate Site Plan would not induce substantial population growth in a manner not contemplated in the General Plan, either directly or indirectly. Like the proposed project, the Alternate Site Plan Alternative would have no impact related to displacing existing housing or people. Impacts to population and housing under the Alternate Site Plan would be similar in comparison to the proposed project.

5.6.2.13 PUBLIC SERVICES

The impacts of the proposed project on all public services would be less than significant. The Alternate Site Plan would be designed to accommodate the same number of units as the proposed project on the same project site. As under the proposed project, this alternative would not result in adverse physical impacts associated with the provision of or need for new or physically altered facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, school, or library services. Impacts to public services under the Alternate Site Plan would be similar in comparison to the proposed project.

5.6.2.14 RECREATION

The impacts of the proposed project on recreational resources would be less than significant. The Alternate Site Plan would be composed of the same components as the proposed project and would generate the same level of usage of existing neighborhood parks or other recreational facilities. As under the proposed project, the Alternate Site Plan would not require the construction or expansion of recreational facilities. Impacts to recreation under the Alternate Site Plan would be similar in comparison to the proposed project.

5.6.2.15 TRANSPORTATION

The transportation impacts of the proposed project would be less than significant. The Alternate Site Plan would be designed to accommodate the same number of units as the proposed project on the same project site location. The relocation of unit #6 would not require design adjustments that affect the overall circulation or transportation demand of the project. Therefore, impacts of the Alternate Site Plan related to transportation would be similar in comparison to the proposed project.

5.6.2.16 UTILITIES AND SERVICE SYSTEMS

The utilities and service systems impacts of the proposed project would be less than significant. The Alternate Site Plan would be designed to accommodate the same number of units as the proposed project on the same project site. Similar to the proposed project, the Alternate Site Plan would have sufficient water supplies to serve the project and would not exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board, result in determination by the wastewater treatment provider or solid waste facilities of inadequate capacity to serve the project, or violate applicable federal, state, or local solid waste statutes and regulations. Impacts to utilities and service systems under the Alternate Site Plan would be similar in comparison to the proposed project.

5.6.2.17 WILDFIRE

The wildfire impacts of the proposed project would be less than significant. Under the Alternate Site Plan Alternative, the project site would be developed similar to the proposed project. The Alternate Site Plan alternative would be required to comply with the same regulations as the proposed project to avoid significant impacts regarding emergency response and evacuation, wildfire risk, and flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Therefore, impacts of the Alternate Site Plan related to wildfire would be similar in comparison to the proposed project.

5.6.3 RELATIONSHIP OF THE ALTERNATIVE TO THE OBJECTIVES

Because most of the project components would remain the same under the Alternate Site Plan, except for relocation of unit #6, this alternative would fulfill all the project objectives, provide an architecturally distinctive housing project that increases the City's housing supply, and contribute positively to the residential character of this area of the Oakland Hills. Features of the Alternate Site Plan would support or exceed the City's sustainability goals by using only LED light sources and landscape with native and/or adaptive and drought-resistant plant materials. The Alternate Site Plan would cluster housing on the 2.6-acre development area and propose that the remaining 17.4 acres of the project site be preserved as open space to be held in perpetuity to balance the preservation of existing vegetation and wildlife habitat with wildfire prevention.

5.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, Section 15126.6, *Consideration and Discussion of Alternatives to the Proposed Project*, of the State CEQA Guidelines requires that an "environmentally superior" alternative be selected and that the reasons for such a selection be disclosed. In general, the environmentally superior alternative is the alternative that would be expected to generate the fewest environmental impacts.

As shown in Table 5-1, the No Project Alternative would generally result in reduced or similar impacts when compared to the proposed project; however, it is considered to result in greater impacts in land use and planning because it would not preserve sensitive habitat in Oakland the same as the proposed

project. Furthermore, the No Project Alternative would not meet the objectives of the proposed project. The Alternate Site Plan Alternative would result in similar impacts to the proposed project and would slightly lessen impacts to biological resources; therefore, it is considered the environmentally superior alternative. Furthermore, the Alternate Site Plan Alternative would advance the goals and overall intent of the Oakland General Plan with respect to increasing the housing stock and preserving sensitive habitat, similar to the proposed project. The Alternate Site Plan Alternative would also meet all of the objectives of the proposed project.

6. CEQA Required Assessment Conclusions

This chapter provides an overview of the impacts of the proposed project based on the analyses in Chapters 4.1 through 4.17 of this Draft Environmental Impact Report (EIR). The topics covered in this chapter include impacts found not to be significant, growth-inducing impacts, and significant irreversible changes to the environment. A more detailed analysis of the effects that the proposed project would have on the environment and proposed mitigation measures to minimize significant impacts, are provided in Chapters 4.1 through 4.17 of this Draft EIR.

6.1 IMPACTS FOUND NOT TO BE SIGNIFICANT

California Environmental Quality Act (CEQA) Guidelines Section 15128, *Effects Not Found to be Significant*, allows environmental issues for which there is no likelihood of significant impact to be "scoped out" and not analyzed further in the EIR. This section explains the reasoning by which it was determined that the proposed project would have no impacts to agricultural, forestry, and mineral resources.

6.1.1 AGRICULTURAL AND FORESTRY RESOURCES

Maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation categorize lands at the project site as Urban and Built-Up Land and Other Land.[1] There are no lands classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance at the project site. The project site is not subject to Williamson Act contracts. In addition, the City of Oakland does not contain land zoned for forestland or timberland production, nor is the project site zoned for agricultural use.[2] Consequently, there would be no impacts with regard to agriculture and forestry resources.

6.1.2 MINERAL RESOURCES

The California Department of Conservation, Geological Survey has classified lands within Alameda County into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act of 1974. These MRZs identify whether known or inferred significant mineral resources are present. Lead agencies are required to incorporate identified MRZs delineated by the State into their general plans.[3] The project site and the

[1] California Department of Conservation, 2018, California Important Farmland Finder, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed October 25, 2022.

[2] City of Oakland, December 2018, *City of Oakland Zoning and Estuary Policy Plan Maps*, https://cao-94612.s3.amazonaws.com/documents/Zoning_EPP_Map_20181211.pdf, accessed October 25, 2022.

[3] Public Resources Code Section 2762(a)(1).

nearby vicinity is in an MRZ-2 area, where there is adequate information indicating significant mineral deposits are present or where there is a high likelihood for their presence.[4] Additionally, the City of Oakland General Plan Open Space, Conservation and Recreation Element, indicates that the Leona rhyolite deposits that are in the Oakland hills are of regional significance and recommends the conservation of the deposits.[5] However, the proposed project would not impact the conservation of the mineral resource. The site is zoned for residential development and is surrounded by similar uses. No mining activity is planned for the site or vicinity. Therefore, the proposed project would not result in the loss of availability of a known mineral resource of value to the region or residents of the State. There are no operational mineral resource recovery sites in Oakland delineated in the Open Space, Conservation and Recreation Element or any other specific plan or land use plan. Similarly, the proposed project would not result in the quarrying of any mineral resource. Therefore, the proposed project would have no impact related to the loss of availability of a mineral recovery site.

6.2 GROWTH INDUCEMENT

CEQA Guidelines Section 15126.2(e) requires that an EIR discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical growth-inducing factors might include the extension of urban services or transportation infrastructure to a previously unserved or underserved area, or the removal of major barriers to development. This section evaluates the proposed project's potential to create such growth inducements. Not all aspects of growth inducement are negative; rather, negative impacts associated with growth inducement occur only where the growth associated with the proposed project would cause adverse environmental impacts.

Growth-inducing impacts fall into two general categories: direct or indirect. Direct growth-inducing impacts are generally associated with providing urban services to an undeveloped area. Indirect, or secondary growth-inducing impacts, consist of growth induced in the region by additional demands for housing, goods, and services associated with the population increase caused by or attracted to a new project. As described in Chapter 3, *Project Description*, of this Draft EIR, the proposed project would result in ten new housing units. Implementation of the proposed project would indirectly induce growth by providing new residential growth development. Applying the California Department of Finance's estimate of an average household size of 2.4 persons per household for the City of Oakland, the proposed project would accommodate an estimated 24 new residents to the city of Oakland.[6]

In addition, growth under the proposed project would have beneficial effects as well. The proposed project would provide additional housing for people working in Oakland and other surrounding communities. State law requires the City to promote the production of housing to meet its fair share of

[4] Department of Conservation, 1987, CGS Information Warehouse: Mineral Land Classification, https://maps.conservation.ca.gov/cgs/informationwarehouse/mlc/, accessed October 25, 2022.

[5] Oakland, City of, 1996. *City of Oakland General Plan, Oscar Element, Earth Resources*.

[6] California Department of Finance, May 2022, *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark*, https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/, accessed October 10, 2022.

the regional housing needs distribution made by the Association of Bay Area Governments, and the proposed project would assist the City in satisfying these requirements. Although development from the proposed project would involve construction activities that could generate some temporary employment opportunities, it is unlikely that construction workers would relocate to Oakland as a result of this future development.

6.3 SIGNIFICANT AND IRREVERSIBLE CHANGES

Section 15126.2(d) of the CEQA Guidelines requires an EIR to discuss the extent to which a proposed project would commit nonrenewable resources to uses that future generation would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed below.

6.3.1 LAND USE CHANGES THAT COMMIT FUTURE GENERATIONS

The proposed project consists of the construction of ten single family homes on currently undeveloped land. Because the site is currently undeveloped, the construction of the proposed project would permanently change the existing site and commit future generations to uses that are not already prevalent on the project site; it would not be feasible to return the developed land to its existing (pre-project) condition.

6.3.2 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Potential environmental accidents of concern include those that would have adverse effects on the environment or public health due to the nature or quantity of material released during an accident and the receptors exposed to that release. Construction activities associated with development of the proposed project would involve some risk for environmental accidents. However, these activities would be monitored by local, State, and federal agencies and would follow professional industry standards for safety and construction. Additionally, the land uses proposed by the proposed project would not include any uses or activities that are likely to contribute to or be the cause of a significant environmental accident. As a result, the proposed project would not pose a substantial risk of environmental accidents.

6.3.3 LARGE COMMITMENT OF NONRENEWABLE RESOURCES

Consumption of nonrenewable resources includes issues related to increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. Redevelopment of the proposed project site would require water and electric service as well as additional resources for construction. Construction and ongoing maintenance of the proposed project would irreversibly commit some materials and nonrenewable energy resources. Materials and resources used would include, but are not limited to, nonrenewable and limited resources such as oil, gasoline, sand, gravel, asphalt, and steel. These materials and energy resources would be used for infrastructure development, transportation of people and goods, and utilities. During the operational phase of the proposed project (post-construction), energy sources

including oil and gasoline would be used for lighting, heating, and cooling as well as transportation of people to and from the project site.

However, the proposed project would be required to comply with and implement several measures that would offset or reduce the need for nonrenewable resources. For example, the proposed project is required to comply with all applicable building and design requirements, including those in the California Code of Regulations, Title 24, relating to energy conservation. With compliance with Part 11 of Title 24, the State's Green Building Standards Code, also known as CALGreen, the proposed project is required to reduce water consumption by 20 percent, divert 65 percent of construction waste from landfills, and install low-pollutant-emitting materials. The proposed project would also apply environmentally sustainable standards for construction and operation. Further, the city does not contain any agricultural land or a mining reserve; therefore, there would be no impact with regard to those resources (see Section 6.1, *Impacts Found Not to Be Significant*).

Although the construction and operation of the proposed residential development project would involve the use of nonrenewable resources, through the inclusion of energy-conserving project features and compliance with applicable standards and regulations, the proposed project would not represent a large commitment of nonrenewable resources.

7. Organizations and Persons Consulted

This Draft Environmental Impact Report (EIR) was prepared by the contributors listed herein and includes content and information provided by the lead agency, other agencies, service providers, consultants, and other contributors.

7.1 LEAD AGENCY

City of Oakland

Planning and Building Department
Office of the City Attorney
Fire Department
Department of Transportation
Public Works Department

7.2 OTHER AGENCIES AND ORGANIZATIONS CONSULTED

Native American Heritage Commission

Native American Tribes

Amah Mutsun Tribal Band
Amah Mutsun Tribal Band of Mission San Juan Bautista
Costanoan Rumsen Carmel Tribe
Guidiville Indian Rancheria
Indian Canyon Mutsun Band of Costanoan
The Confederate Villages of Lisjan
Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
North Valley Yokuts Tribe
The Ohlone Indian Tribe

7.3 CONSULTANTS

PlaceWorks: Environmental Prime Consultant

Environmental Collaborative: Biological Resources

Fehr & Peers: Wildfire Evacuation

HortScience | Bartlett: Arborist

Tom Origer & Associates: Cultural Resources

W-Trans: Transportation

8. Acronyms and Abbreviations

ACRONYM/ ABBREVIATION	DEFINITION
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACCWP	Alameda County Clean Water Program
AC Transit	Alameda-Contra Costa County Transit
ADT	Average daily traffic
AF	acre-feet
AFY	acre-feet per year
AR4	Fourth Assessment Report
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BMP	best management practice
C_3H_4O	acrolein
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal OES	California Office of Emergency Services
CalOSHA	California Division of Occupational Safety and Health
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	California Fire Code

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	DEFINITION
CGP	Construction General Permit
CH_4	methane
CHP	California Highway Patrol
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2e	carbon dioxide-equivalent
CoIWMP	Alameda County Countywide Integrated Waste Management Plan
CPUC	California Public Utilities Commission
CUPA	Certified Unified Program Agency
CVP	Central Valley Project
CWA	Clean Water Act
C&D	Construction and Demolition
dB	decibel
dBA	A-weighted decibel
dbh	Diameter breast height
DPM	diesel particulate matter
DTSC	Department of Toxic Substance Control
DWR	Department of Water Resources
EBCE	East Bay Community Energy
EBMUD	East Bay Municipal Utility District
EBRPD	East Bay Regional Park District
ECAP	Equitable Climate Action Plan
EIR	Environmental Impact Report
EMBUD	East Bay Municipal Utility District
EO	Executive Order
EOP	Emergency Operations Plan
EPCRA	Emergency Planning Community Right-to-Know Act
ESA	Endangered Species Act
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	fire hazard severity zone
FIRM	Flood Insurance Rate Map
FRA	federal responsibility area
GHG	greenhouse gas
GPD	gallons per day
GWP	global warming potential

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	DEFINITION
H_2O	water vapor
HOA	Homeowner's Association
HRA	Health Risk Assessment
HVAC	heating, ventilation, and air conditioning
I-	Interstate
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IWMP	Integrated Waste Management Plan
lbs	pounds
LCFS	Low Carbon Fuel Standard
L_{dn} or DNL	Day-Night Sound Level
LEED	Leadership in Energy and Environmental Design
L_{eq}	Equivalent Continuous Noise Level
L_n	Statistical Sound Level
LRA	local responsibility area
MBTA	Migratory Bird Treaty Act
MEIR	maximum exposed individual resident
MGD	million gallons per day
MMRP	Mitigation Monitoring and Reporting Program
$MMTCO_2e$	million metric tons of CO_2e
MPG	miles per gallon
MPO	metropolitan planning organization
MRZ	mineral resource zone
MRP	Municipal Regional Stormwater Permit
MT	metric tons
MTC	Metropolitan Transportation Commission
$MTCO_2e$	metric ton of CO_2e
MWELO	Model Water Efficient Landscape Ordinance
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NO	nitrogen oxides
NO_2	nitrogen dioxide
NOAA Fisheries	National Oceanic and Atmospheric Administration, National Marine Fisheries Service
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OEHHA	Office of Environmental Health and Hazard Assessment
OFD	Oakland Fire Department

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	DEFINITION
OHP	Office of Historic Preservation
OMC	Oakland Municipal Code
OPD	Oakland Police Department
OPL	Oakland Public Library
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OUSD	Oakland Unified School District
PAR	Preliminary Arborist Report
Pb	lead
PDA	Priority Development Area
PEV	Plug-In Electric Vehicles
PG&E	Pacific Gas and Electric Company
PM_{10}	coarse inhalable particulate matter
$PM_{2.5}$	fine inhalable particulate matter
ppb	parts per billion
ppd	pounds per day
ppm	parts per million
PPV	Peak particle velocity
PRC	Public Resources Code
PRD	Permit Registration Document
PUD	Planned Unit Development
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Allocation
RPS	Renewables Portfolio Standard
ROG	reactive organic gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel Efficient
SB	Senate Bill
SCA	Standard Conditions of Approval
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SO_2	sulfur dioxide
SO_4	sulfates
SO_x	sulfur oxides
SR-	State Route
SRA	state responsibility area
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan

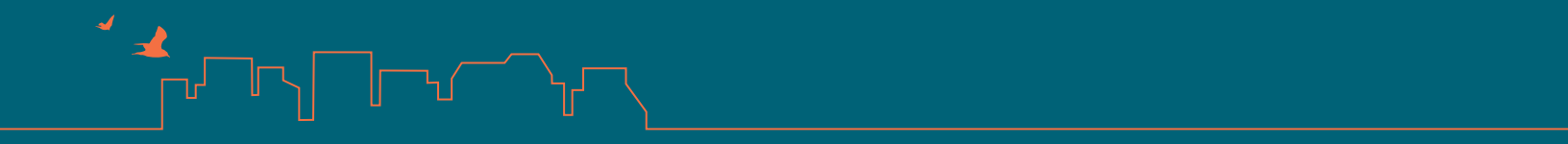
ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	DEFINITION
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TPA	Transit Priority Area
TRU	transport refrigeration unit
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
UV	ultraviolet
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
VHFHSZ	very high fire hazard severity zone
VMP	Vegetation Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compound
WELO	Water Efficient Landscaping Ordinance
WMAC	Waste Management of Alameda County
WRRP	Waste Reduction and Recycling Plan
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant
WUI	wildland-urban interface
WWTP	Wastewater Treatment Plant
ZE	zero-emission
ZEV	zero-emission vehicle
ZNE	zero net energy

ACRONYMS AND ABBREVIATIONS

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