

December 2014 | Public Review Draft EIR



San Leandro Shoreline Development Project EIR

for the City of San Leandro

December 2014
Public Review Draft EIR

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San Leandro Shoreline Development Project EIR

for the City of San Leandro

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1. *Executive Summary*

This chapter presents an overview of the proposed San Leandro Shoreline Development Project, herein referred to as “Project.” This executive summary also provides a summary of the alternatives to the Project, identifies issues to be resolved, areas of controversy, and conclusions of the analysis contained in Chapters 4.0 through 4.14 of this Draft Environmental Impact Report (Draft EIR). For a complete description of the Project, see Chapter 3, Project Description. For a discussion of alternatives to the Project, see Chapter 6, Alternatives to the Project.

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

This Draft EIR has been prepared pursuant to the requirements of CEQA (California Public Resources Code, Division 13, Section 21000, et seq.) and the State CEQA Guidelines (Title 14 of the California Code of Regulations, Division 6, Chapter 3, Section 15000, et seq.) in order to determine if approval of the identified discretionary actions and related subsequent development could have a significant impact on the environment. The City of San Leandro, 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 reports. Information for this Draft EIR was obtained from on-site field observations; discussions with public service 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, greenhouse gas emissions, noise, geotechnical and transportation and traffic).

1.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the environmental effects associated with approval and implementation of the Project. The six main objectives of this document as established by CEQA are:

- 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 reasons for agency approval of projects with significant environmental effects.

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- 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 the CEQA statute and in the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed 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 merits and disadvantages of a project that is subject to its discretionary authority. Prior to approving a proposed project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts and alternatives, and adopt a Statement of Overriding Considerations if the proposed project would result in significant impacts that cannot be avoided.

1.1.1 EIR ORGANIZATION

This Draft EIR is organized into the following chapters:

- **Chapter 1: Executive Summary.** Summarizes environmental consequences that would result from implementation of the Project, describes recommended mitigation measures, and indicates the level of significance of environmental impacts before and after mitigation.
- **Chapter 2: Introduction.** Provides an overview describing the Draft EIR document.
- **Chapter 3: Project Description.** Describes the Project in detail, including the site location and characteristics, objectives, and some of the technical elements of the proposed action.
- **Chapter 4: Environmental Evaluation.** Organized into 14 sub-chapters corresponding to the environmental resource categories identified in Appendix G of the CEQA Guidelines, this section provides a description of the physical environmental conditions in the vicinity of the Project as they existed at the time the Notice of Preparation was published, from both a local and regional perspective. Additionally, this chapter provides an analysis of the potential environmental impacts of the Project, and recommended mitigation measures, if required, to reduce the impacts to less than significant where possible, and to reduce their magnitude or significance when impacts cannot be reduced to a less-than-significant level. The environmental setting included in each sub-chapter provides baseline physical conditions, which provide a context, which the lead agency uses to determine the significance of environmental impacts resulting from the Project. Each sub-chapter also includes a description of the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the Project; and the potential cumulative impacts associated with the Project.
- **Chapter 5: Significant Unavoidable Adverse Impacts.** Identifies impacts that cannot be mitigated to a less-than-significant level, and therefore would remain significant and unavoidable.

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- **Chapter 6: Alternatives to the Project.** Considers alternatives to the Project, including the CEQA-required “No Project” alternative, a Relocated Hotel Alternative, and a Reduced Density/Intensity Alternative.
- **Chapter 7: CEQA-Mandated Sections.** Discusses growth inducement, cumulative impacts, and significant irreversible changes as a result of the Project.
- **Chapter 8: Organizations and Persons Consulted.** Lists the people and organizations that were contacted during the preparation of this EIR for the Project.
- **Appendices:** The appendices for this document contain the following supporting documents:
 - Appendix A: Notice of Preparation and Notice of Preparation Comments Letters
 - Appendix B: Urban Decay Analysis
 - Appendix C: Shade/Shadow Diagrams
 - Appendix D: Air Quality and Greenhouse Gas Background and Modeling Data
 - Appendix E: Health Risk Assessment
 - Appendix F: San Leandro Marina Opportunities and Constraints Analysis
 - Appendix G: Noise Monitoring Data
 - Appendix H: Transportation Impact Study
 - Appendix I: Water Supply Assessment (WSA) Request and WSA

1.1.2 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.

As described in the CEQA Guidelines, different types of EIRs are used for varying situations and intended uses. Given the permitting and development actions that are related both geographically and as logical parts in the chain of contemplated actions for implementation, this Draft EIR has been prepared as a Project EIR, pursuant to Section 15161 of the CEQA Guidelines. As a Project EIR, the environmental analysis will focus primarily on the changes in the environment that would result from the development of The San Leandro Shoreline Development Project. This Project EIR will examine the specific short-term impacts (construction) and long-term impacts (operation) that would occur as a result of Project approval by the City of San Leandro City Council.

1.2 SUMMARY OF THE PROPOSED PROJECT

As a part of a public/private partnership, the City of San Leandro and Cal Coast Companies LLC propose to redevelop the 52-acre site land area (owned by the City) and 23-acre water area (owned by the City), which encompasses the San Leandro Marina and surrounding properties, with residential, commercial, and public recreational uses. Implementation of the Project would involve the removal of many of the structures on the site including the existing El Torito restaurant building, the Mulford Branch Library building, and the San Leandro Yacht Club building. Although direction from the San Leandro City Council

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to staff is to maintain the existing San Leandro Marina for as long as financially feasible, for the purpose of the environmental analysis, it is being assumed that the harbor masters office, fuel pump/dock, and the 462 existing boat slips in the harbor basin would eventually be removed by the City at such time as safe and navigable boating operations cease to exist. Additionally, five of the tees/holes on the nine-hole Marina Golf Course would need to be reconfigured in order to accommodate the housing that is proposed to be built on the grounds of the course; however, no tees/holes would be removed as part of the Project. The existing Marina Inn building and the Horatio's restaurant building on the site would remain a part of the Project area.

New features on the site as a result of the Project include an approximately 150,000-square-foot office campus, a new 200-room hotel, an approximately 15,000-square-foot conference center, 354 housing units, 3 new restaurants totaling approximately 21,000 square feet, and a new parking structure. To accommodate this growth a variety of public amenities would be installed. Some of these amenities include a new approximately 2,500-square-foot community library/community meeting space, an aquatic center/dock, bocce ball courts, outdoor recreational areas, picnic areas, a perched beach, pedestrian piers, two miles of public promenade, a natural shoreline element along the interior of the harbor basin, a pedestrian/bicycle bridge, a boardwalk/lookout pier, several small finger piers, and refurbishment of existing public restrooms on site. Additionally, with implementation of the Project and removal of the existing boat slips, the harbor would only be open to non-motorized watercraft. For this reason, the Project includes the construction of a small boat launch, a kayak storage building, and an aeration fountain in the harbor basin to aide in water circulation.

1.3 SUMMARY OF PROJECT ALTERNATIVES

This Draft EIR analyzes alternatives to the Project that are designed to reduce the significant environmental impacts of the Project and feasibly attain most of the Project objectives. There is no set methodology for comparing the alternatives or determining the environmentally superior alternative under CEQA. Identification of the environmentally superior alternative involves weighing and balancing all of the environmental resource areas by the City. The following alternatives to the Project were considered and analyzed in detail:

- No Project
- Relocated Hotel Alternative
- Reduced Density/Intensity Alternative

Chapter 6, Alternatives to the Project, includes a complete discussion of these alternatives and of alternatives that were rejected for various reasons.

1.3.1 NO PROJECT ALTERNATIVE

Consistent with Section 15126.6 (e) (2) of the CEQA Guidelines, under the No Project Alternative, the Project site would remain in its existing condition. Although existing land use designations and zoning would allow for some future development under existing conditions, under this alternative, the Project site would not be further developed. Further, improvements proposed by the Project, such as removing the marina infrastructure, adding new housing units, new restaurants, commercial and retail uses, a new

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parking structure, and public amenities, including a community library, aquatic center, and enhanced shoreline access would not occur.

1.3.2 RELOCATED HOTEL ALTERNATIVE

Under the Relocated Hotel Alternative, the proposed hotel would be relocated from its proposed location at the end of Mulford Point Drive. Potential locations that could accommodate the hotel include: the parking lot along Pescador Point Drive, which is southeast of the current proposed location; the parking lot along Mulford Point Drive, which is directly adjacent to the northeast of the proposed location; and on the corner of Monarch Point Drive and Monarch Bay Drive. Under this alternative, all other components, such as square footage, residential units, hotel rooms, and other development, of the Project would remain the same.

1.3.3 REDUCED DENSITY/INTENSITY ALTERNATIVE

Under the Reduced Density/Intensity Alternative, Project components, such as square footage, residential units, and hotel rooms would be reduced by 25 percent over what is proposed under the Project.

1.4 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 Project, the major issues to be resolved include decisions by the City of San Leandro, as Lead Agency, related to:

- Whether this Draft EIR adequately describes the environmental impacts of the Project.
- Whether the social and economic benefits of the Project override those environmental impacts that cannot be feasibly avoided or mitigated to a level of insignificance.
- Whether the proposed land use changes are compatible with the character of the existing area.
- Whether the identified mitigation measures should be adopted or modified.
- Whether there are other mitigation measures that should be applied to the Project besides those Mitigation Measures identified in the Draft EIR.
- Whether there are any alternatives to the Project that would substantially lessen any of the significant impacts of the Project and achieve most of the basic objectives.

1.5 AREAS OF CONTROVERSY

The City issued a Notice of Preparation (NOP) on July 3, 2013, and reissued an NOP December 11, 2013, as a result of minor revisions to the Project. Changes in the Project from the July 2013 to the December 2013 NOP include an increase in proposed residential units from 188 to 354, a reduction in office space from 250,000 square feet to 150,000 square feet, and an increase in parking spaces from 1,802 to 1,973. The CEQA-mandated scoping period for this EIR was between December 11, 2013 and January 9, 2014,

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during which interested agencies and the public could submit comments about the Project. During this time, the City received comment letters from a variety of State and local agencies as well as several organizations, businesses and interested individuals.

The following is a list of issues that are likely to be of particular concern to agencies and interested members of the public during the environmental review process. While every concern applicable to the CEQA process is addressed in this Draft EIR, this list is not necessarily exhaustive, but rather attempts to capture those concerns that are likely to generate the greatest interest based on the input received during the scoping process.

- Air Quality from construction
- Operational traffic impacts
- Impacts to existing views in the vicinity of the Project

1.6 SUMMARY OF IMPACTS AND MITIGATION MEASURES

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
AESTHETICS			
AES-1. The Project would not have a substantial adverse effect on a scenic vista.	LTS	N/A	N/A
AES-2. The Project would not substantially degrade the view from a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings.	No Impact	N/A	N/A
AES-3. The Project would not substantially degrade the existing visual character or quality of the site and its surroundings.	LTS	N/A	N/A
AES-4. The Project would not expose people on- or off-site to substantial light or glare, which would adversely affect day or nighttime views in the area.	LTS	N/A	N/A
AES-5. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to aesthetics.	LTS	N/A	N/A
AIR QUALITY			
AIR-1. Implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	N/A	N/A
AIR-2. During construction of the Project, construction activities would generate fugitive dust during ground-disturbing activities that exceeds the BAAQMD significance thresholds.	S	<p>AIR-2: Applicants for new development projects within the Shoreline Development shall require their construction contractor(s) to comply with the following BAAQMD Best Management Practices for reducing construction emissions of PM₁₀ and PM_{2.5}:</p> <ul style="list-style-type: none"> ▪ Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible. ▪ Pave, apply water twice daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. ▪ Cover all trucks hauling soil, sand, and other loose materials or 	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
		<p>require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).</p> <ul style="list-style-type: none"> ▪ Sweep daily (with water sweepers using reclaimed water if possible) or as often as needed all paved access roads (e.g., Monarch Bay Drive and Fairway Drive), parking areas and staging areas at the construction site to control dust. ▪ Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the Project site, or as often as needed, to keep streets free of visible soil material. ▪ Hydro-seed or apply non-toxic soil stabilizers to inactive construction areas. ▪ Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.) ▪ Limit vehicle traffic speeds on unpaved roads to 15 mph. ▪ Replant vegetation in disturbed areas as quickly as possible. ▪ Install sandbags or other erosion control measures to prevent silt runoff from public roadways. <p>The City of San Leandro Building Official or their designee shall verify compliance that these measures have been implemented during normal construction site inspections.</p>	
AIR-3. During operation, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.	LTS	N/A	N/A
AIR-4: Construction and operation of the Project would cumulatively contribute to the non-attainment designations of the SFBAAB.	S	AIR-4: Implementation of Mitigation Measures AIR-2 and AIR-5 would reduce cumulative air quality impacts.	LTS
AIR-5: Construction activities of the Project could expose sensitive receptors to substantial concentrations of TAC and PM _{2.5} .	S	AIR-5: The construction contractor shall use equipment that meets the United States Environmental Protection Agency (EPA)-Certified Tier 3 emissions standards for off-road diesel-powered construction equipment greater than 50 horsepower. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine, as defined by	LTS

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		<p>CARB regulations. Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 3 or higher emissions standards and Level 3 diesel emissions control for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the Project Site for verification by the City of San Leandro Building Official or their designee. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site. Equipment shall properly service and maintain construction equipment in accordance with the manufacturer’s recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board’s Rule 2449.</p>	
<p>AIR-6. Operation of the Project would not expose sensitive receptors to substantial concentrations of air pollution.</p>	LTS	N/A	N/A
<p>AIR-7. Implementation of the Project would not create or expose a substantial number of people to objectionable odors.</p>	LTS	N/A	N/A
<p>AIR-8: Construction and operation of the Project would cumulatively contribute to the non-attainment designations of the SFBAAB.</p>	S	<p>AIR-8: Implementation of Mitigation Measures AIR-2 and AIR-5 would reduce cumulative air quality impacts.</p>	LTS
BIOLOGICAL RESOURCES			
<p>BIO-1A. Proposed development could adversely affect the monarch butterfly winter roosting habitat if adequate controls on tree removal and pruning are not implemented.</p>	S	<p>BIO-1A: <i>Ensure Protection of Monarch Butterfly Colony.</i> Proposed development shall be designed to avoid adverse impacts on monarch butterfly winter roosting habitat, including controls on removal and pruning of trees in the southeastern portion of the Project site where the monarch butterfly overwintering colony is located. A Monarch Butterfly Roosting Habitat Protection Program (MBRHPP) shall be prepared by a qualified biologist and ensure adequate avoidance and protection of the winter roosting colony, consistent with the intent of Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the San Leandro Municipal Code.</p>	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
		<p>The MBRHPP shall be submitted as part of the Site Plan Review and/or tentative map application, whichever is first, and shall include the following components:</p> <ul style="list-style-type: none"> ▪ The MBRHPP shall be prepared by a qualified biologist experienced in management of monarch butterfly colonies in California, and shall describe existing winter roosting colony habitat essential to the monarch butterfly colony and required measures taken to ensure both roosting and wind buffering trees are adequately protected. ▪ All mature blue gum eucalyptus and pine trees in the colony and along the east edge of the South Golf Course Residential development shall be preserved and protected as part of the MBRHPP, with trunk locations and edge of canopy clearly mapped by engineered survey in relation to proposed building footprints, landscaping and other improvements that may otherwise disrupt their function in buffeting winds. ▪ As necessary to protect the wind buffering trees, the eastern edge of the proposed South Golf Course residential area may require relocation as part of the MBRHPP to provide a larger setback if there is a risk to these trees as a result of construction activities or future maintenance for fire fuel management, landscape maintenance, and other practices. Where private yards and/or common open space associated with the South Golf Course residential area extends under the canopy of the buffering trees, appropriate CCRs shall be developed to ensure long-term protection as part of future maintenance activities. ▪ The MBRHPP shall identify restrictions and seasonal controls on construction, tree removal, and vegetation management within 200 feet of the edge of trees known to support the winter roosting colony, including tree removal, pruning, and herbicide application, and appropriate timing of construction and required management within this zone. Grading and equipment operation, any tree removal, pruning, or herbicide application in the vicinity shall be restricted from August 1 through March 31 to prevent any inadvertent disturbance to the winter roosting colony. 	

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<p>BIO-1B. Proposed development could result in inadvertent loss of special-status fish species and other aquatic species as part of in-water construction activities if adequate controls are not implemented.</p>	S	<ul style="list-style-type: none"> ▪ The MBRHPP shall be submitted for review and approval as part of the Site Plan Review and/or tentative map application for the South Golf Course Residential development. <p>BIO-1B: <i>Prevent Inadvertent Loss of Special-Status Fish and Aquatic Life</i>. Appropriate construction controls and restrictions shall be taken to prevent inadvertent loss of special-status fish species and other aquatic life as a result of construction activities within or near areas of tidal influence and open water habitat of San Francisco Bay to avoid possible inadvertent take of Central California Coastal steelhead, green sturgeon, Delta smelt, Sacramento splittail, Central Valley spring-run chinook salmon, and longfin smelt, if present in the area during the time of construction. This shall be accomplished with the following provisions:</p> <ul style="list-style-type: none"> ▪ Adequate measures shall be taken to minimize disturbance and sedimentation in aquatic habitat of the bay, which may include installation of silt curtains around in-water construction zones, restrictions on in-water operations to low tide periods, and timing restrictions for in-water construction, among other possible controls and restrictions. ▪ Any pumping as part of dewatering construction areas or as part of the proposed aeration fountain shall be adequately screened according to the latest screening guidelines of the CDFW, USFWS, and NOAA Fisheries to prevent entrainment of special-status fish and other aquatic life during their operation. ▪ Any in-water construction activities shall be restricted to the period from June 15 through October when stray or dispersing special-status fish species would most likely not be expected within the affected areas. ▪ The applicant shall obtain all necessary authorizations from the CDFW, NOAA Fisheries, and USFWS as required by federal and State law for potential harm to special-status fish species. Such authorization would be obtained as a result of interagency coordination through the Army Corps Section 404 consultation and the CDFW Section 2081 Incidental Take Permit process. The Project shall adhere to any additional conditions and restrictions 	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
required as part of the authorizations from regulatory agencies.			
BIO-1C. Proposed development could result in inadvertent loss of bird nests in active use, which would conflict with the federal Migratory Bird Treaty Act and California Fish and Game Code if adequate controls and preconstruction surveys are not implemented.	S	BIO-1C: <i>Ensure Avoidance of Bird Nests in Active Use.</i> Tree removal, landscape grubbing, building demolition, and other construction activities, such as grading and utility installation shall be performed in compliance with the Migratory Bird Treaty Act and relevant sections of the California Fish and Game Code to avoid loss of nests in active use. This shall be accomplished by scheduling tree removal and building demolition outside of the bird nesting season (which occurs from February 1 to August 31) to avoid possible impacts on nesting birds if new nests are established in the future. Alternatively, if tree removal and building demolition cannot be scheduled during the non-nesting season (September 1 to January 31), a pre-construction nesting survey shall be conducted. The pre-construction nesting survey shall include the following: <ul style="list-style-type: none"> ▪ A qualified biologist (Biologist) shall conduct a pre-construction nesting bird (both passerine and raptor) survey within seven calendar days prior to tree removal, landscape grubbing, other construction activities and/or building demolition. ▪ If no nesting birds or active nests are observed, no further action is required and tree removal, landscape grubbing, other construction activities, and building demolition shall occur within seven calendar days of the survey. ▪ Another nest survey shall be conducted if more than seven calendar days elapse between the initial nest search and the beginning of tree removal, landscape grubbing, other construction activities and building demolition. ▪ If any active nests are encountered, the Biologist shall determine an appropriate disturbance-free buffer zone to be established around the nest location(s) until the young have fledged. Buffer zones vary depending on the species (i.e., typically 75 to 100 feet for passerines and 300 feet for raptors) and other factors such as ongoing disturbance in the vicinity of the nest location. If necessary, the dimensions of the buffer zone shall be determined in consultation with the California Department of Fish and 	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
BIO-2. The 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.	No Impact	<p>Wildlife.</p> <ul style="list-style-type: none"> ▪ Orange construction fencing, flagging, or other marking system shall be installed to delineate the buffer zone around the nest location(s) within which no construction-related equipment or operations shall be permitted. Continued use of existing facilities such as surface parking and site maintenance may continue within this buffer zone. ▪ No restrictions on grading or construction activities outside the prescribed buffer zone are required once the zone has been identified and delineated in the field and workers have been properly trained to avoid the buffer zone area. ▪ Construction activities shall be restricted from the buffer zone until the Biologist has determined that young birds have fledged and the buffer zone is no longer needed. ▪ A survey report of findings verifying that any young have fledged shall be submitted by the Biologist for review and approval by the City of San Leandro prior to initiation of any tree removal, landscape grubbing, building demolition, and other construction activities within the buffer zone. Following written approval by the City, tree removal, and construction within the nest-buffer zone may proceed. 	N/A
BIO-3. Proposed development would result in fills and modifications to jurisdictional waters, which would require appropriate controls, compensatory mitigation, and regulatory authorizations.	S	<p>BIO-3: <i>Provide Compensatory Mitigation for Wetland Modifications.</i> A compensatory mitigation program shall be developed and implemented to provide adequate mitigation for jurisdictional waters affected by proposed improvements. A jurisdictional wetland delineation shall be prepared by a qualified wetland specialist and submitted for verification by the Army Corps. A Wetland Protection and Replacement Program (WPRP) shall be prepared by the qualified wetland specialist and implemented to provide compensatory mitigation at a minimum 2:1 ratio where wetland habitat is affected,</p>	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
		<p>shall minimize disturbance to unvegetated waters, and shall be reviewed and approved by regulatory agencies. The WPRP shall include appropriate implementation measures to prevent inadvertent loss and degradation of jurisdictional waters to be protected, and replacement for those wetland features eliminated or modified as a result of development. The WPRP shall contain the following components:</p> <ul style="list-style-type: none"> ▪ Where verified waters of the U.S. are present and cannot be avoided, authorization for modifications to these features shall be obtained from regulatory agencies with jurisdiction. This includes the Army Corps through the Section 404 permitting process where waters of the United States are affected by the Project and the RWQCB as part of the Section 401 Certification process. Together with a Streambed Alteration Agreement (SAA) secured from CDFW, if required as part of the SAA Notification process for proposed fills to the man-made drainage and possibly the pond on the golf course. All conditions required as part of the authorizations by the Army Corps, RWQCB, and CDFW shall be implemented as part of the project. ▪ Consultation or incidental take permitting may be required under the California and federal Endangered Species Acts. The applicant shall obtain all legally required permits or other authorizations from the USFWS, NOAA Fisheries, and CDFW under the Endangered Species Acts. ▪ Install orange construction fencing around the boundary of all wetland areas and waters to be preserved at the interface with proposed fills and grading so that they are not disturbed during construction. The fencing shall be placed a minimum of 25 feet out from the boundary of the wetlands/waters but may need to be adjusted if restoration activities are to be conducted within this area. Grading, construction, and restoration work within the wetland/waters buffer zones shall be conducted in a way that avoids or minimizes disturbance of existing wetlands and aquatic habitat. ▪ A qualified biologist/restoration specialist shall be available during 	

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BIO-4. The Project would not interfere substantially 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.	LTS	<p>construction to provide situation-specific wetland avoidance measures or planting recommendation, as needed.</p> <ul style="list-style-type: none"> ▪ Success criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures in the WPRP shall be specified. Monitoring shall be conducted by the qualified wetland specialist for a minimum of five years and continue until the success criteria are met. Permanent monitoring transects shall be established as part of the program and vegetation data collected in the spring and summer months when plant identification is possible. Photo stations shall be established along each monitoring transect, and photographs taken every year during the required monitoring period. ▪ Annual monitoring reports shall be prepared by the qualified wetland specialist and submitted to resource agency representatives and the City’s Planning Services and Building and Safety Services Divisions by December 31 of each monitoring year for a minimum of five years or longer, until the defined success criteria are met. The annual report shall summarize the results of the monitoring effort, performance standards, and any required contingency measures, and shall include photographs of the monitoring transects and program success. Maps shall be included in the monitoring report to show the location of monitoring transects and photo stations. 	N/A
BIO-5. Proposed development would result in removal of trees regulated under City Ordinance, and possible damage to other trees unless adequate controls are implemented.	S	<p>BIO-5A: <i>Tree Protection and Replacement</i>. The Project shall comply with Section 4-1906, Existing Trees on Development Sites, in Article 19, Landscape Requirements of the City of San Leandro Zoning Code. Compliance with the Zoning Ordinance shall be achieved through adherence with the following provisions:</p> <ul style="list-style-type: none"> ▪ All trees with a trunk diameter of 6 inches or greater shall be 	LTS

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		<p>identified on site plans prior to site plan approval, together with information on species, size, assigned tree number, trunk location determined by engineer survey, and extent of drip line.</p> <ul style="list-style-type: none"> ▪ A tree report shall be prepared by a certified arborist prior to site plan approval, providing additional information on tree health, appearance, and suitability for preservation of each regulated tree. ▪ All grading, improvement plans, and construction plans prepared for building permits shall clearly indicate trees proposed to be removed, altered, or otherwise affected by development construction, together with the “limit of grading” line. ▪ Adequate measures shall be defined in the tree report to protect all trees to be preserved. This shall include installation of temporary construction fencing at the perimeter of the protected area, restrictions on construction within the fenced areas unless approved as a condition of the application and performed under the supervision of the certified arborist, and prohibition on parking or storing of vehicles and other construction equipment within the protected area. ▪ Where avoidance of a regulated tree is not feasible, replacement tree plantings shall be provided prior to site plan approval as part of the final landscape plan. 	
BIO-5B, Proposed development would result in removal of trees regulated under City Ordinance, and interfere with Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the Municipal Code.	S	BIO-5B: Implement Mitigation Measure BIO-1A to ensure protection of trees supporting Monarch Butterfly colony.	LTS
BIO-6. The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.	No Impact	N/A	N/A
BIO-7. Proposed development would result in a cumulative impact with regard to biological resources.	S	BIO-7: Implement Mitigation Measures BIO-1A, BIO-1B, BIO-1C, BIO-3, BIO-5A, and BIO-5B.	LTS

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CULTURAL RESOURCES			
CULT-1. The Project would adversely affect locally important on-site monuments.	S	CULT-1: Prior to the issuance of grading permits, the Project Applicant shall preserve or relocate the mosaic depicting the oyster beds associated with CHL #824, the plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel, and the Lost Boats Memorial placed in memory of USS Argonaut and the USS Grampus. Following consultation between the City and Project Applicant with the Office of Historic Preservation regarding the CHL #824 and the United States Submarine Veterans of World War II regarding the Lost Ships Memorial, the City of San Leandro shall provide input regarding the Jack D. Maltester Channel plaque. If relocation of the monuments is recommended in order to preserve the monuments, the specific construction techniques shall be identified in order to limit any damage to the monuments.	LTS
CULT-2. The Project would have the potential to cause a significant impact to an archaeological resource pursuant to CEQA Guidelines Section 15064.5.	S	<p>CULT-2. Archeological resources are not known or likely on the Project site. The following measures shall be implemented to avoid inadvertent damage or loss if such resources are discovered during construction. A qualified archeologist shall be on-site to monitor the initial excavation of native soil once all pavement of engineered soil is removed from the Project site. After monitoring the initial excavation, the archeologist shall make recommendations for further monitoring if it is determined that the site has archeological resources. If the archeologist determines that no resources are likely to be found on-site, no additional monitoring shall be required.</p> <p>If currently unknown historic/prehistoric artifacts or human remains are discovered during ground disturbing activities, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▪ In compliance with State law (Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code), in the event that historical artifacts are found, all work within 50 feet of the find shall stop and a qualified archaeologist shall examine the find. The archaeologist shall then submit a plan for evaluation of the resource to the City of San Leandro Planning Services Division for approval. If the evaluation of the resource 	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
CULT-3. The Project would have the potential to directly or indirectly affect a unique paleontological resource or site, or unique geologic feature.	S	<p>concludes that the found resource is eligible for the California Register of Historic Resources, a mitigation plan shall be submitted to the City of San Leandro Planning Services Division for approval, which shall consider reasonable efforts for the resources to be preserved in place or left in an undisturbed state. If the artifacts and samples recovered during construction are determined to be significant and cannot be preserved in pace, the artifacts shall be cataloged and curated by a qualified archaeologist and placed in an appropriate curation facility. The mitigation plan shall be completed before earthmoving or construction activities can recommence within the designated resource area.</p>	LTS
CULT-4. The Project would have the potential to disturb human remains, including those interred outside of	S	CULT-4. No human remains are known or likely on the Project site. If human skeletal remains are uncovered during construction, the	LTS

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formal cemeteries.		<p>contractor shall immediately halt work within 50 feet of the find, contact the Alameda County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5(e)(1) of the CEQA Guidelines. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains (Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 [as amended by AB 2641]). Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery.</p> <p>Per Public Resources Code 5097.98, the contractor shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the human remains are located, is not damaged or disturbed by further development activity until the contractor has discussed and conferred, as prescribed in this section (California Public Resources Code Section 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the MLD does not make recommendations within 48 hours, the Project Applicant shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD’s recommendations, the Project Applicant or the descendent may request mediation by the NAHC.</p>	
CULT-5. The Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant impacts with respect to cultural resources.	LTS	N/A	N/A
GEOLOGY, SOILS, AND SEISMICITY			
GEO-1. The Project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground	S	GEO-1. Require geotechnical reports for all development within the Project site, as required by the San Leandro Municipal Code Section 7-12. The geotechnical reports shall consider the potential	LTS

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shaking, seismic-related ground failure, including liquefaction and lateral spreading.		<p>earthquake related impacts of strong ground shaking amplification due to the soft underlying sediments, as identified in this DEIR. Seismic ground motion parameters shall be provided in the geotechnical reports in accordance with CBC requirements. The building plans shall incorporate all design and construction criteria specified in the report(s). The geotechnical engineer shall sign the improvement plans and approve them as conforming to their recommendations prior to issuance of building permits. The geotechnical engineer shall also assume responsibility for inspection of the work and shall certify to the City, prior to acceptance of the work that the work performed is adequate and complies with its recommendations. The geotechnical engineer of record shall prepare letters and as-built documents to document their observances during construction and to document that the work performed is in accordance with the project plans and specifications. As required by the City of San Leandro, all construction activities shall meet the CBC regulations for seismic safety (i.e. reinforcing perimeter and/or load bearing walls, bracing parapets, etc.). In addition, all project-related grading, trenching, backfilling and compaction operations shall be conducted in accordance with the City of San Leandro Engineering Department’s Standard Plans. All improvements shall conform to regulations for seismic safety contained in the CBC.</p>	
GEO-2. The Project could result in substantial soil erosion or the loss of topsoil.	S	<p>GEO-2A. The Project civil engineer shall prepare an erosion control plan. The erosion control plan shall be submitted to the City as a part of building and/or grading plan submittal. The erosion control plan shall conform to the guidelines of the Clean Water Program and Utilize BMP’s detailed under section “C6 CASQA - BMPs Erosion Control” of the Program Resources.</p> <p>GEO-2B: The existing rip-rap providing coastal erosion protection shall be periodically refurbished to maintain effective erosion control. This may include local replacement of rip-rap boulders as well as periodic re-building of rip-rap armament sections degraded by wave attack and/or long-term erosion.</p>	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
GEO-3A. The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading, subsidence, liquefaction, or collapse.	S	GEO-3A. Project-specific geotechnical reports shall be prepared in accordance with the City’s grading permit regulations. The recommendations for both special foundations and other geotechnical engineering measures specified in project specific geotechnical reports shall be implemented during design and construction. These measures include use of deep foundations engineering and removal or improvement of potentially liquefiable soils. Documentation of the methods used shall be provided in the required design-level geotechnical report(s).	LTS
GEO-3B. The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading.	S	GEO-3B. The potential for lateral spreading shall be evaluated as a part of the required geotechnical reports. Where necessary, corrective measures shall be included in the required design-level geotechnical report(s) and implemented during construction. These measures could include retaining structures to stabilize channel margins, use of deep foundations, removal or improvement of liquefiable soils, and/or the use of relatively rigid foundations.	LTS
GEO-3C. The Project could result in a significant impact related to development on unstable geologic units and soils or result in subsidence or collapse.	S	GEO-3C. Settlement of the existing fill and Bay Mud could have adverse effects on shallow foundations, underground utilities, pavements, and other improvements. Options to mitigate these effects include use of shallow ridged foundations for smaller structures, supporting larger structures with deep foundations such as driven piles, and installing flexible connections for utilities. Pre-loading consolidation (surcharging) prior to construction of new improvements could also be considered. The recommendations for both special foundations and other geotechnical engineering measures specified in project specific geotechnical reports shall be implemented during design and construction.	LTS
GEO-4. The Project could create substantial risks to property as a result of its location on expansive soil, as defined by Section 1803.5.3 of the California Building Code.	S	GEO-4. The Project geotechnical engineer shall make specific recommendations for mitigation of expansive soils under pavements and structures, including techniques such as capping expansive soils with a layer of non-expansive fill, or by lime treatment. Typical mitigation measures for pavements could include special pavement design, lime treatment of subgrade soils and/or sub-excavation of expansive soils and replacement with non-expansive fill. These recommendations shall be based on testing of the in-site fill	LTS

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GEO-5. The 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.	No Impact	materials. The recommendations shall be submitted to the City as a part of building and/or paving plan submittal.	N/A
GEO-6. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology and soils.	LTS	N/A	N/A
GREENHOUSE GAS EMISSIONS			
GHG-1: Implementation of the Project would directly or indirectly generate GHG emissions that may have a significant impact on the environment.	S	GHG-1A: Residential developments that include garage parking shall be electrically wired to accommodate electric vehicle charging. The location of the electrical outlets shall be specified on building plans and proper installation shall be verified by the San Leandro Building and Safety Division prior to issuance of a Certificate of Occupancy.	SU
		GHG-1B.: Electrical vehicle Level 2 charging stations shall be provided for the hotel and office land uses for the review and approval of the San Leandro Community Development Director. A minimum of one electric vehicle charging space shall be provided for every 25,000 square feet of non-residential building square footage. The location of the electrical vehicle charging stations shall be specified on site plans, and proper installation shall be verified by the Building and Safety Division prior to issuance of a Certificate of Occupancy.	
		GHG-1C: Applicant-provided appliances shall be Energy Star appliances (dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star appliances shall be verified by the San Leandro Building and Safety Division during plan check.	
		GHG-1D: Applicants, or their designee, for large non-residential development projects (e.g., employers with 50 employees at work site) shall establish an employee trip commute reduction program (CTR), in conformance with the Bay Area Air Quality Management District’s Commuter Benefits Program (California Government Code	

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
		<p>Section 65081). The program shall offer one of the following commuter benefit options:</p> <ul style="list-style-type: none"> ▪ Pre-tax benefit: Allow employees to exclude their transit or vanpooling expenses from taxable income, up to \$130 per month. ▪ Employer provided subsidy: Provide a subsidy to reduce or cover employees’ monthly transit or vanpool costs, up to \$75 per month. ▪ Employer-provided transit: Provide a free or low-cost transit service for employees, such as a bus, shuttle or vanpool service. ▪ Alternative commuter benefit: Provide an alternative commuter benefit that is as effective in reducing single-occupancy commute trips, as the options above. <p>The employer shall also provide information about other commute options and connect commuters for carpooling, ridesharing, and other activities. The CTR program shall identify alternative modes of transportation to the Project Site, including transit schedules, bike and pedestrian routes, and carpool/vanpool availability. Information regarding these programs shall be readily available to employees and clients and shall be posted in a highly visible location and/or made available online. The project applicant shall consider the following additional incentives for commuters as part of the CTR program:</p> <ul style="list-style-type: none"> ▪ Preferential carpool parking. ▪ Flexible work schedules for carpools. ▪ Telecommute and/or flexible work hour programs. ▪ Car-sharing program (e.g., Zipcar). ▪ Bicycle end-trip facilities, including bike parking, showers, and lockers. <p>The CTR program shall be prepared for the review and approval by the Community Development Director prior to occupancy permits.</p>	

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
		GHG-1E: Applicants for new development projects within the San Leandro Shoreline Development shall achieve either the Build-it-Green GreenPoint Rated or US Green Building Council's Leadership in Energy and Environmental Design (LEED) standards that are endorsed by the City.	
		GHG-1F: Applicants for future projects within the Project shall design individual habitable residential and non-residential structures to be 15 percent more energy efficient than the current Building and Energy Efficiency Standards. The 15-percent reduction in building envelope energy use shall be based on the current Building and Energy Efficiency Standards (Title 24, Part 6, of the California Building Code) that is in place at the time building permits are submitted to the City. Architectural plans submitted to the City Building Division shall identify the requirement to reduce building energy use by 15 percent to meet this requirement.	
GHG-2. Implementation of the Project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.	LTS	N/A	N/A
GHG-3: Implementation of the Project would directly or indirectly generate GHG emissions that may have a cumulatively considerable and therefore significant impact on the environment.	S	GHG-3: Implementation of Mitigation Measures GHG-1A through GHG-1F would reduce cumulative GHG emissions impacts.	SU
HAZARDS AND HAZARDOUS MATERIALS			
HAZ-1. Implementation of the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LTS	N/A	N/A
HAZ-2. Implementation of the 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.	LTS	N/A	N/A

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
HAZ-3. Implementation of the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school.	No Impact	N/A	N/A
HAZ-4. The 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 and, as a result, create a significant hazard to the public or the environment.	No Impact	N/A	N/A
HAZ-5. Implementation of the Project within 2 miles of a public airport would not result in a safety hazard for people residing or working in the Project area.	LTS	N/A	N/A
HAZ-6. The project would not be within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.	No Impact	N/A	N/A
HAZ-7. Implementation of the Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	LTS	N/A	N/A
HAZ-8. Implementation of the 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.	No Impact	N/A	N/A
HAZ-9. Implementation of the Project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to hazards and hazardous materials.	LTS	N/A	N/A
HYDROLOGY AND WATER QUALITY			
HYDRO-1A. Construction activities could temporarily degrade water quality with increases in suspended sediment and turbidity and could result in the release of chemicals and hydrocarbon fuels into the water column.	S	HYDRO-1A. <i>Minimize Impacts to Water Quality during Waterside Demolition and Construction Activities.</i> The following mitigation measures are designed to avoid adverse impacts on water quality during waterside demolition and construction activities:	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
HYDRO-1B. Construction activities could temporarily degrade water quality with increases in suspended sediment and turbidity and could result in the release of chemicals and hydrocarbon fuels into the water column.	S	<ul style="list-style-type: none"> ▪ Piles shall be removed during low tide periods to minimize the amount of sediments re-suspended in the water column. ▪ When removing piles, the pile shall be hit or vibrated first to break the bond with the sediment, which would minimize the likelihood of the pile breaking and reduce the amount of sediment released into the water column. ▪ A turbidity curtain shall be installed prior to removing or installing piles or any other waterside activities to minimize turbidity impacts in the water column. ▪ Piles shall be pulled from the subsurface and quickly placed onto a receiving barge or land to minimize potential releases of creosote, petroleum sheens, and turbidity in the water column. Piles shall not be rinsed or washed. The storage area for the piles shall include straw bales, filter fabric, or other containment devices to contain runoff. ▪ During removal of the existing dock system, floating rafts and/or trash and debris containment booms shall be placed under the docks and around the areas of demolition to contain debris that may be released during these activities. ▪ Any waterside construction activities shall be restricted to the period from June 15 through October when special-status fish species would most likely not be expected within the affected areas. <p>HYDRO-1B. <i>Minimize Potential for Fuel Releases During Waterside Demolition and Other Construction Activities.</i> The following mitigation measures are designed to avoid potential releases of fuel constituents into the water column during demolition/construction activities:</p> <ul style="list-style-type: none"> ▪ A spill contingency plan shall be prepared that addresses the potential for an accidental release of fuel into navigable waterways. The plan shall include floating booms and absorbent materials to recover hazardous spills and include provisions for containment, removal, and disposal of spilled materials. ▪ No fueling, cleaning, or maintenance of vehicles or equipment 	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
HYDRO-2. The 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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted.)	LTS	<p>shall take place within an area where an accidental discharge to navigable waterways may occur.</p> <ul style="list-style-type: none"> ▪ All vehicles and equipment operating within or adjacent to the marina or other waterways shall be visually inspected for fuel or waste releases before the beginning of the work day. If spillage or leaks occur during the work day, they shall be noted and recorded and immediate action shall be taken for removal and disposal. ▪ Floating booms shall be available for containing spills or debris discharged into the water during demolition and construction activities and any debris shall be removed as soon as possible but no later than the end of each day. ▪ If it is determined that a small portion of the Project site west of Monarch Bay Drive and/or the drainage channel along the west side of the golf course are jurisdictional wetlands or regulated waters by the Army Corps, a Section 404 permit shall be obtained from the Army Corps and a Section 401 water quality certification shall be obtained from the RWQCB. The permit and certification shall specify methods for protecting water quality during construction activities, including BMPs to minimize turbidity, control floating debris, and provide spill containment and cleanup equipment. 	N/A

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
HYDRO-3. The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site.	LTS	N/A	N/A
HYDRO-4. The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial flooding on- or off-site.	LTS	N/A	N/A
HYDRO-5. The Project would not create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	LTS	N/A	N/A
HYDRO-6. The Project would not otherwise substantially degrade water quality.	LTS	N/A	N/A
HYDRO-7. The Project would place housing within the 100-year floodplain and within areas subject to sea level rise/coastal high hazard.	S	<p>HYDRO-7: <i>Minimize Potential for Flooding for Housing within the 100-Year Floodplain and within Areas Subject to Sea Level Rise/Coastal High Hazard.</i> The current FEMA FIRM panels are undergoing revisions and it is possible that no portions of the Project site will be within the 100-year floodplain when the Project is scheduled to start construction. However, because a portion of the Project site is currently within the 100-year floodplain and a portion of the Project site could be designated as being within the 100-year floodplain, the following mitigation measures are applicable:</p> <ul style="list-style-type: none"> ▪ Prior to the start of construction or development, the Applicant shall obtain a development permit from the City's Floodplain Administrator. The application shall include the proposed elevation in relation to mean sea level of the lowest floor (including basement) of all structures and the proposed elevation in relation to mean sea level to which any structure will be flood-proofed in accordance with the City's Municipal Code requirements under Chapter 7-9, <i>Floodplain Management</i>. ▪ All provisions for building within the 100-year floodplain that are 	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
		<p>specified in the FEMA NFIP requirements and the City’s Municipal Code shall be implemented to minimize the risk of flood damage.</p> <ul style="list-style-type: none"> ▪ A registered engineer or architect shall develop or review the structural design and plans for construction and certify that the design and methods of construction are in accordance with Federal, State, County, and City standards. ▪ Prior to the issuance of building permits, a Letter of Map Revision (LOMR) and elevation certificate shall be submitted to the City’s Chief Building Official. The bottom of the lowest horizontal structural member of the lowest floor shall be at or above the BFE, with a recommendation that the structures be one to three feet above the BFE. Also, any structure below the BFE in the VE zone shall be less than 299 square feet and shall only be used for storage parking, or access (SPA). ▪ Prior to the issuance of building permits, a Letter of Map Revision (LOMR) and elevation certificate shall be submitted to the City’s Chief Building Official. The bottom of the lowest horizontal structural member of the lowest floor shall be at or above the BFE. Also, any structure below the BFE in the VE zone shall be less than 299 square feet and shall only be used for storage parking, or access (SPA). ▪ Prior to the start of construction or development, the latest version of the FIRM maps shall be reviewed to determine if portions of the Project site are within the 100-year floodplain and to determine the status of actions taken by the City of San Leandro and the Alameda Public Works Department to remove 1,000 properties from the preliminary FIRM maps. If any portion of the Project site is determined to be within the 100-year floodplain, then the mitigation measures listed above shall be applicable. ▪ Prior to issuance of a tentative map, a sea level rise risk assessment shall be prepared and submitted to the City for areas of the Project that are subject to sea level rise. The risk assessment shall be prepared by a qualified engineer and shall be based on the estimated 100-year flood elevation and the best 	

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
		estimates for future sea level rise and current and future flood protection. A range of sea level rise projections for mid-century and end of century shall be used in the risk assessment along with inundation maps. The risk assessment shall identify all types of potential flooding, degrees of uncertainty, consequences of defense failure, and risks to existing habitat from proposed flood protection devices. The Project shall be designed to be resilient to a mid-century sea level rise projection. If the Project would remain in place longer than mid-century, an adaptive management plan shall be developed to address the long-term impacts that would arise. The results of the risk assessment shall be incorporated into the site design, as reflected in the site plan review and tentative map review. The sea level rise risk assessment shall also be submitted to BCDC for review and approval for the areas of the project that are within BCDC's jurisdiction (i.e., within 100 feet of the shoreline), prior to the start of construction or development.	
HYDRO-8. The Project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	No Impact	N/A	N/A
HYDRO-9. The Project would not result in inundation by seiche, tsunami, or mudflow.	LTS	N/A	N/A
HYDRO-10. The Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to hydrology and water quality.	LTS	N/A	N/A
LAND USE AND PLANNING			
LAND-1. The Project would not physically divide an established community.	LTS	N/A	N/A
LAND-2. The proposed Project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	N/A	N/A

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
LAND-3. The Project would not conflict with any applicable habitat conservation plan (HCP) or natural community conservation plan.	No Impact	N/A	N/A
LAND-4. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to land use and planning.	LTS	N/A	N/A
NOISE			
NOISE-1. The Project would expose people to or generate noise levels in excess of standards established in the General Plan and/or the applicable standards of other agencies.	S	NOISE-1A: The project applicant shall submit an acoustic study to the satisfaction of the City’s Chief Building Official with the applications for site plan review and/or Tentative Map, whichever is earlier. The study shall demonstrate that all development meets applicable exterior noise standards and all new residences meet an interior noise level due to exterior noise of 45 dBA CNEL consistent with State and local noise standards. The acceptable interior noise levels for all non-residential construction will be determined based on a case-by-case basis according to the type of activity proposed. This is in accordance with General Plan Policy 35.02, Residential Interior Noise Standard. The study shall be based on precise grading and architectural plans including specific construction method details and materials to calculate the necessary exterior to interior noise reduction of approximately 20 dBA to achieve 45 dBA CNEL for residential construction. The precise exterior to interior reduction would be determined in the acoustical study when precise grading plans with building elevations, footprints and architectural plans are available. The applicant shall incorporate into the Project design all required noise insulation features and techniques necessary to reduce interior noise levels to achieve the interior noise standard. To achieve the required interior noise levels, features such as upgraded exterior wall and roof assemblies, upgraded windows, and exterior doors may be required.	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
NOISE-2. Implementation of the Project could result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	S	<p>NOISE-1B: All residential units of the Project shall include an alternative form of ventilation, such as noise-baffled passive air ventilation systems or mechanical air conditioning systems, that would allow windows to remain closed for prolonged periods of time to meet the interior noise standard of 45 dBA Ldn established by the City and the Uniform Building Code Requirements.</p> <p>NOISE-2. For construction, grading, and demolition activities that would use vibration-intense equipment such as pile driving, rock blasting and vibratory rollers that would occur within 250 feet of existing residential, commercial, libraries, and hotel buildings, the following mitigation measures shall be implemented in close coordination with City of San Leandro staff so that alternative construction techniques or scheduling approaches are undertaken.</p> <p>For projects where vibration-intense equipment would be utilized within 250 feet of existing residential, commercial, libraries, and hotel buildings the following controls to reduce potential vibration impacts shall be implemented during construction, as practical:</p> <ul style="list-style-type: none"> ▪ Prior to the issuance of building permits, City staff shall coordinate with the applicant and/or construction contractor to discuss alternative methods of construction for vibration-intense activities in close proximity to sensitive uses or existing structures. As part of this coordination, the applicant and/or construction contractor shall identify construction methods not involving vibration-intensive equipment or activities. For example, drilled foundation caisson holes that would produce less vibration than pile driving methods, or the use of non-explosive rock breaking methods. ▪ The project applicant or constructor contractor shall implement reduced-vibration alternative methods identified during project review during subsequent excavation, grading, and construction for work conducted in close proximity to sensitive structures or uses. ▪ If possible, vibration-intense construction activities should take place during times when nearby sensitive receptors, such as libraries and hotel rooms are at their lowest utilization/ 	SU

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
NOISE-3. Implementation of the Project would result in a substantial permanent increase in ambient noise levels in the vicinity of the project site above levels existing without the Project.	S	<p>occupancy.</p> <ul style="list-style-type: none"> ▪ Prior to the issuance of building permits, the applicant and/or construction contractor shall inspect and report on the current structural condition of the existing buildings within 200 feet from where pile driving, rock blasting, or within 30 feet from where vibratory rollers would be used. ▪ During construction, if any vibration levels cause cosmetic or structural damage to existing buildings in close proximity to a project site, the applicant shall immediately issue “stop-work” orders to the construction contractor to prevent further damage. Work shall not restart until the building is stabilized and/or preventive measures are implemented to relieve further damage to the building(s). <p>With implementation of the mitigation measures listed above, the project would reduce potential vibration impacts. It is not known at this point if implementation of these measures would be feasible and if they would provide enough reduction to mitigate levels below thresholds. Even with implementation of the mitigation measures above, the project could result in substantial vibration levels to uses in the vicinity of the project site. This impact would be <i>significant and unavoidable</i>.</p> <p>NOISE-3: The existing single-family and multi-family residential uses along Marina Boulevard west of Aurora Drive would experience a noise increase of 4.1 dBA for all three scenarios due to project-related traffic. The resulting noise level at uses along this segment would be greater than 60 dBA L_{dn}, which is the exterior noise level that the City strives to achieve for residential exterior uses. According to the City’s General Plan Policies 35.03 and 35.04 listed above, the noise level increase greater than 3 dBA and resulting in an ambient noise level greater than 60 dBA L_{dn} at noise-sensitive residential uses along this segment would be considered a significant impact. Potential mitigation measures to be considered would be the construction of noise barriers along this road, or resurfacing this segment with rubberized asphalt. However, the construction of noise barriers are not feasible as the residential areas front and</p>	SU

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NOISE-4. Construction activities associated with buildout of the Project would result in substantial temporary or periodic increases in ambient noise levels in the vicinity of the Project site above existing levels.	S	<p>access Marina Boulevard; in addition, rubberized asphalt is only effective at roads in which cars travel at high speeds, as it only reduces tire-asphalt noise, but the speed limit in that segment is low, making this solution not effective. Therefore, no feasible mitigation measures are available to reduce these impacts. Therefore, on-road vehicle noise due to the project would result in substantial permanent increases in ambient noise levels along Marina Boulevard west of Aurora Drive, and this impact would be <i>significant and unavoidable</i>.</p> <p>NOISE-4: The Project shall implement the following measures.</p> <ul style="list-style-type: none"> ▪ Construction equipment shall be well maintained and used judiciously to be as quiet as practical. 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; ▪ Utilize “quiet” models of air compressors and other stationary noise sources where such technology exists. Select hydraulically- or electrically-powered equipment and avoid pneumatically powered equipment where feasible. Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project demolition or construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures; ▪ Locate stationary noise-generating equipment as far as possible from sensitive receptors that adjoin construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible; ▪ Prohibit unnecessary idling of internal combustion engines; 	LTS

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
		<ul style="list-style-type: none"> ▪ Prior to initiation of on-site construction-related demolition or earthwork activities, a minimum 6-foot-high temporary sound barrier shall be erected along the project property line abutting adjacent operational businesses, residences or other noise-sensitive land uses. These temporary sound barriers shall be constructed with a minimum surface weight of four pounds per square foot and shall be constructed so that vertical or horizontal gaps are eliminated. These temporary barriers shall remain in place through the construction phase in which heavy construction equipment, such as excavators, dozers, scrapers, loaders, rollers, pavers, and dump trucks, are operating within 150 feet of the edge of the construction site by adjacent sensitive land uses. This measure could lower construction noise levels at adjacent ground floor residential units by up to 8 dBA, depending on topography and site conditions; ▪ Erect temporary noise control blanket barriers, if necessary, along building façades facing construction sites to prevent sleep disturbance. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling; ▪ To the maximum extent feasible, route construction-related traffic along major roadways and away from sensitive receptors; ▪ Notify all businesses, residences or other noise-sensitive land uses within 500 feet of the perimeter of the construction site of the construction schedule in writing prior to the beginning of construction and prior to each construction phase change that could potentially result in a temporary increase in ambient noise levels in the project vicinity; ▪ Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the on-site complaint and enforcement manager, and the City’s Chief Building Official, in the event of problems; ▪ An on-site complaint and enforcement manager shall be available to respond to and track complaints. The manager will be 	

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
		responsible for responding to any complaints regarding construction noise and for coordinating with the adjacent land uses. The manager will determine the cause of any complaints (e.g., starting too early, bad muffler, etc.) and coordinate with the construction team to implement effective measures (considered technically and economically feasible) warranted to correct the problem. The telephone number of the coordinator shall be posted at the construction site and provided to neighbors in a notification letter. The manager shall notify the City’s Chief Building Official of all complaints within 24 hours. The manager will be trained to use a sound level meter and should be available during all construction hours to respond to complaints; and <ul style="list-style-type: none"> ▪ A preconstruction meeting shall be held with the Chief Building Official and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are fully operational. The above mitigation measures shall be identified in construction contracts and acknowledged by the contractor.	
NOISE-5. The Project would not result in exposure of people residing or working in the vicinity of the Project site to excessive aircraft noise levels, for a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport.	LTS	N/A	N/A
NOISE-6. The Project would not result in exposure of people residing or working in the Project site to excessive noise levels, for a project within the vicinity of a private airstrip.	No Impact	N/A	N/A
NOISE-7. This Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant impacts with respect to noise.	LTS	N/A	N/A

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POPULATION AND HOUSING			
POP-1. The Project would not induce substantial unexpected population growth, or growth for which inadequate planning has occurred, either directly or indirectly.	LTS	N/A	N/A
POP-2. The Project would not displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.	LTS	N/A	N/A
POP-3. The Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	LTS	N/A	N/A
POP-4. This Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant impacts with respect to population and housing.	LTS	N/A	N/A
PUBLIC SERVICES AND RECREATION			
SVCS-1. The Project would not result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.	LTS	N/A	N/A
SVCS-2. The Project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to fire protection services.	LTS	N/A	N/A
SVCS-3. The Project would not result in the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.	LTS	N/A	N/A

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SVCS-4. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to police services.	LTS	N/A	N/A
SVCS-5. The Project would not result in the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.	LTS	N/A	N/A
SVCS-6. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to school services.			
SVCS-7. The Project would not result in the need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.	LTS	N/A	N/A
SVCS-8. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to parks.	LTS	N/A	N/A
SVCS-9. The Project would not result in the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.	LTS	N/A	N/A
SVCS-10. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to the construction of other public facilities.	LTS	N/A	N/A

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Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
TRANSPORTATION AND TRAFFIC			
TRAF-1A: The proposed Project would contribute to unacceptable operation (from LOS C to LOS E in the AM and PM peak hours) at the intersection of Doolittle Drive and Marina Boulevard (#11) under baseline Plus Project conditions.	S	<p>TRAF-1A.1: Convert the existing eastbound right-turn lane on Marina Boulevard to a shared through-right turn lane to provide one left-turn lane, one through lane and one shared through-right turn lane on the eastbound approach.</p> <p>TRAF-1A.2: Optimize the cycle length of the traffic signal at the intersection of Doolittle Drive and Marina Boulevard (#11). The traffic signal does not operate in coordination with any other signal; therefore, the cycle length can be adjusted without affecting other signals in the system.</p>	LTS
TRAF-1B: The proposed Project would contribute to unacceptable operation (from LOS D to LOS E in the PM peak hour) at the intersection of San Leandro Boulevard and Marina Boulevard (#18) under baseline Plus Project conditions.	S	TRAF-1B: Optimize the traffic signal timing splits at the intersection of San Leandro Boulevard and Marina Boulevard (#18).	LTS
TRAF-1C: The proposed Project would contribute to unacceptable operation (from LOS A to LOS F in the AM and from LOS B to LOS F in the PM peak hour) at the intersection of Aurora Drive and Marina Boulevard (#10) under baseline Plus Project conditions.	S	<p>TRAF-1C: Install a modern mini-roundabout that could be accommodated within the existing right-of-way. Research has shown that roundabout-controlled intersections have similar low frequency and severity of crashes as all-way stop-controlled intersections. Further, the slower speed at roundabout also reduces the risk of injuries and fatalities for road users in the event of a crash. A conceptual drawing of a mini-roundabout is provided in Figure 4.13-5. Implementation of this mitigation measure would improve the operation of this intersection to LOS A in the AM, PM and Saturday midday peak hours. Alternatively, installation of a traffic signal would also mitigate the project impact as peak hour signal warrant is met. Upon implementation, the intersection would improve to LOS B in the AM peak hour and LOS A in the PM peak hour and Saturday midday peak hour.</p>	LTS
TRAF-1D: The proposed Project would contribute to unacceptable operation (from LOS A to LOS F in the PM peak hour) at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) under baseline Plus Project conditions.	S	TRAF-1D: Install a roundabout at the intersection of Monarch Bay Drive and Mulford Point Drive (#19).	LTS

LTS = Less Than Significant S = Significant SU = Significant Unavoidable Impact

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
TRAF-2A: The proposed Project would cause the I-880 northbound segment north of Davis Street to reduce from LOS E to LOS F in the PM peak hour under Year 2020 conditions	S	TRAF-2A: One of the following measures shall occur: <ul style="list-style-type: none"> Widen I-880 to provide an additional travel lane in the northbound direction; or Develop and implement a Transportation Demand Management (TDM) plan that would discourage single occupant vehicle trips. TDM measures may include: <ul style="list-style-type: none"> Provide a shuttle service that operates between the Project site and key locations such as San Leandro and Coliseum BART stations and Oakland International Airport; Facilitate carpool and ridesharing among residents of the Project 	SU
TRAF-2B: The proposed Project would cause the volume-to-capacity (v/c) ratio on the northbound segment of Doolittle Drive, which would operate at Level of Service (LOS) F, to increase by 0.06 under Year 2020 conditions and by 0.04 under Year 2035 conditions in the PM peak hour.	S	TRAF-2B.1: Widen Doolittle Drive to provide an additional travel lane in the northbound direction; or TRAF-2B.2: Provide a shuttle service that operates between the Project site and key locations such as San Leandro and Coliseum BART stations and Oakland International Airport.	SU
TRAF-2C: The proposed Project would cause increases in delays at the Aurora Drive and Marina Boulevard (#10), Marina Boulevard and Merced Street (#12), Marina Boulevard and I-880 southbound off ramp (#14), and Monarch Bay Drive and Mulford Point Drive (#19) intersections, which would adversely impact the transit operations of AC Transit Line S, 75 and 89.	S	TRAF-2C: Implement Mitigation Measures TRAF-1A through TRAF-7F. Any roundabouts shall be designed to accommodate AC Transit busses.	LTS
TRAF-3: The proposed Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.	No Impact	N/A	N/A
TRAF-4A: The location of the proposed northern driveway of the North Golf Course Residential component of the Project presents a potential sight distance challenge for cars pulling out of the driveway.	S	TRAF-4A: Remove the North Golf Course northern driveway from the Project plans.	LTS

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
TRAF-4B: The proposed southern driveway of the North Golf Course Residential component would potentially result in a design hazard due to its location in relation to the proposed Monarch Bay Drive and Mulford Point Drive intersection.	S	TRAF-4B: Move the Southern Driveway of the North Golf Course residential component to the north, to form a standard four-legged intersection. This measure shall be implemented in coordination with Mitigation Measure TRAF-1D.	LTS
TRAF-5: The proposed Project would not result in inadequate emergency access.	LTS	N/A	N/A
TRAF-6: The proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	LTS	N/A	N/A
TRAF-7A: The addition of traffic associated with implementation of the proposed Project would cause the intersection level of service at Doolittle Drive and Marina Boulevard (#11) to reduce from LOS D to LOS F in the AM and PM peak hours under Near-Term Cumulative Conditions.	S	TRAF-7A: Implementation of Mitigation Measures TRAF-1A.1 – TRAF-1A.2 for the eastbound approach identified under the baseline Plus Project condition.	LTS
TRAF-7B: The addition of traffic associated with implementation of the proposed Project would cause I-880 southbound ramps and Marina Boulevard (#14) to reduce to LOS E during both AM and Saturday peak hours, and would further reduce the service levels from LOS E to LOS F in the PM peak hour, under Near-Term Cumulative Conditions.	S	TRAF-7B.1: Modify the traffic signal to a two-phase operation to provide non-conflicting: <ul style="list-style-type: none"> ▪ Eastbound and westbound through movements on Marina Boulevard during the first phase. ▪ Southbound right-turn, northbound right-turn and westbound left-turn movements during the second phase. TRAF-7B.2: Prohibit westbound U-turn movements.	SU
TRAF-7C: The proposed Project would cause operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) to reduce from LOS D to LOS E in the AM	S	TRAF-7C.1: Add a northbound left-turn lane on San Leandro Boulevard to provide two left-turn lanes: one through lane and one shared through-right turn lane.	

LTS = Less Than Significant S = Significant SU = Significant Unavoidable Impact

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
peak hour, adding to the existing substandard LOS F in the PM peak hour and cause the volume-to-capacity (v/c) ratio to increase by 0.07 under Near-Term Cumulative Conditions.		<p>TRAF-7C.2: Restripe lanes on the west leg to provide two corresponding receiving lanes.</p> <p>The lane geometries before and after implementation of these Mitigation Measures are shown in the figure opposite.</p> 	SU
TRAF-7D: The proposed Project would cause the level of service at the intersection of Aladdin Avenue and Alvarado Street (#28) to reduce from LOS D to LOS E in the PM peak hour under Near-Term Cumulative Conditions.	S	TRAF-7D: Optimize traffic signal cycle length at the intersection of Aladdin Avenue and Alvarado Street. This signal does not operate in coordination with any other signal; therefore, the cycle length can be adjusted without affecting other signals in the system.	LTS
TRAF-7E: The proposed Project would cause the level of service at the intersection of Aurora Drive and Marina Boulevard (#10) to reduce from LOS A to LOS F in the AM peak hour and from LOS B to LOS F in the PM peak hour and from LOS B to LOS E in the Saturday peak hour.	S	TRAF-7E: Implementation of Mitigation Measure TRAF-1C, installing a mini-roundabout or a traffic signal, would lessen the near term cumulative impacts to <i>less than significant</i> . The mini-roundabout would improve the operations to LOS A in all three peak period hours. A traffic signal would improve the operation of the intersection to LOS B in the AM peak hour and LOS A in the PM and Saturday peak hours.	LTS
TRAF-7F: The proposed Project would cause the level of service at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) to reduce from LOS A to LOS F in the PM peak hour.	S	TRAF-7F: Implement Mitigation Measure TRAF-1D by installing a roundabout. This would improve the operations to LOS A in the PM peak hour.	LTS
TRAF-7G: The proposed Project would cause the intersection level of service of the intersection of Doolittle Drive and Marina Boulevard (#11) to reduce from LOS D to LOS F in the AM and PM peak hours	S	TRAF-7G: Implement Mitigation Measures TRAF-1A.1 and TRAF-1A.2.	LTS

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
TRAF-7H: The proposed Project would cause the intersection of Merced Street and Marina Boulevard (#12) to reduce from LOS D to LOS E during the AM and PM peak hours	S	TRAF-7H: Modify the traffic signal phasing and optimize cycle length and signal split timing based on real time traffic demands by improving operations of recently implemented, adaptive traffic signals at the intersection of Merced Street and Marina Boulevard (#12).	LTS
TRAF-7I: The proposed project would cause the operations at the intersection of I-880 southbound ramps and Marina Boulevard (#14) to reduce from LOS D to LOS E in the AM peak hour, adding to the existing substandard operations to further reduce the level of service from LOS E to LOS F in the PM and Saturday peak hours and cause the volume-to-capacity (v/c) ratios to increase by 0.10 during both periods, which is higher than the 0.05 allowed by the City.	S	TRAF-7I: By modifying the signal to a two-phase operation, implementation of Mitigation Measure TRAF-7B.1 (described above) would improve the operations to LOS C in the AM and Saturday peak hours, and to LOS D in the PM peak hour.	SU
TRAF-7J: The proposed Project would add to the Long-Term Cumulative No Project substandard LOS F operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) and cause the v/c ratio to increase by 0.07 in the AM peak hour and 0.10 in the PM peak hour.	S	TRAF-7J: Implementation of Mitigation Measures 7C.1 and 7C.2 would reduce the v/c ratios to a less-than-significant level.	SU
TRAF-7K: The proposed Project would cause the level of service at the intersection of Aladdin Avenue and Teagarden Street (#27) to reduce from LOS D to LOS E in the PM peak hour.	S	TRAF-7K: Optimize the traffic signal cycle length at the intersection of Aladdin Avenue and Teagarden Street (#27). This traffic signal does not operate in coordination with any other signal; therefore, the cycle length can be adjusted without affecting other signals in the system.	LTS
TRAF-7L: The proposed Project would cause the level of service at the intersection of Aurora Drive and Marina Boulevard (#10) to reduce from LOS A to LOS F in the AM peak hour and from LOS B to LOS F in the PM and Saturday peak hours.	S	TRAF-7L: Implementation of Mitigation Measure TRAF-1C, installing a mini-roundabout or a traffic signal, would lessen the impacts in the long term cumulative conditions to <i>less than significant</i> . The mini-roundabout would improve the operations to LOS A in the AM and PM peak hours and to LOS B in the Saturday peak hour. A traffic signal would improve the operation of this intersection to LOS B in the AM peak hour and LOS A in the PM and Saturday peak hours.	LTS

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
TRAF-7M: The proposed Project would cause the level of service at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) to reduce from LOS A to LOS F in the PM peak hour.	S	TRAF-7M: Implement Mitigation Measure TRAF-1D by installing a roundabout at the intersection of Monarch Bay Drive and Mulford Point Drive (#19).	LTS
UTILITIES AND SERVICE SYSTEMS			
UTIL-1. The Project would have sufficient water supplies available to the serve the Project from existing entitlements and resources, and would not require new or expanded entitlements.	LTS	N/A	N/A
UTIL-2. The Project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.	LTS	N/A	N/A
UTIL-3. The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to water service.	LTS	N/A	N/A
UTIL-4. Implementation of the Project would not exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board.	LTS	N/A	N/A
UTIL-5. The Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.	LTS	N/A	N/A
UTIL-6. The Project would not result in the determination by the wastewater treatment provider, which serves the Project that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	LTS	N/A	N/A
UTIL-7. The Project, in combination with past, present, and reasonably foreseeable projects would result in less than significant cumulative impacts with respect to wastewater service.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
UTIL-8. The Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs.	LTS	N/A	N/A
UTIL-9. The Project would comply with federal, State, and local statutes and regulations related to solid waste.	LTS	N/A	N/A
UTIL-10. The Project, in combination with past, present, and reasonably foreseeable development, would result in less than significant impacts with respect to solid waste.	LTS	N/A	N/A
UTIL-11. Implementation of the Project would result in an increase in energy consumption.	S	UTIL-11: Implementation of Mitigation Measures GHG-1A through GHG-1F would increase energy conservation and reduce impacts resulting from energy generation.	LTS

LTS = Less Than Significant S = Significant SU = Significant Unavoidable Impact

EXECUTIVE SUMMARY

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2. Introduction

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Chapter 14 California Code of Regulations, Section 15378[a], The San Leandro Shoreline Development is considered a “project” subject to environmental review as its implementation 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.” This Draft Environmental Impact Report (Draft EIR) provides an assessment of the potential environmental consequences of adoption and implementation of the San Leandro Shoreline Development project, herein referred to as the “Project.”

This Draft EIR identifies mitigation measures and alternatives to the Project that would avoid or reduce significant impacts. This Draft EIR compares the development of the Project with the existing baseline condition, described in detail in each section of Chapter 4.0, Environmental Analysis. The City of San Leandro (City) is the Lead Agency for the Project. This assessment is intended to inform the City’s decision-makers, other responsible agencies, and the public-at-large of the nature of the Project and its effect on the environment.

2.1 PROPOSED ACTION

If approved by the San Leandro City Council, the Project would result in the redevelopment of the properties surrounding the current San Leandro Marina. The Project site is 52 acres in land area and is owned by the City of San Leandro, and 23 acres of water area. The Project is the result of a public/private partnership between the City of San Leandro and Cal Coast Companies LLC. The Project includes a variety of components which are described in detail in Chapter 3 of this Draft EIR. The salient components include a new 150,000 square foot office campus, a new 200-room hotel, a new conference center, 354 new housing units, 3 new restaurants, and a new parking structure. Although direction from the San Leandro City Council to staff is to maintain the existing San Leandro Marina for as long as financially feasible, for the purpose of the environmental analysis, it is being assumed that the harbor masters office, fuel pump/dock, and the 462 existing boat slips in the harbor basin would eventually be removed by the City at such time as safe and navigable boating operations cease to exist. Since the Project is to be carried out as a partnership between the City and Cal Coast Companies LLC, and the City would need to issue a variety of discretionary permits, pursuant to section 21065 of the CEQA statute, the Project is defined as a “project” under CEQA and is subject to the provisions of the statute.

2.2 EIR SCOPE

This document is a project-level EIR that identifies and analyzes potential environmental impacts of the Project. This is in contrast to programmatic EIRs which are used to assess the impact of land use plans where specific uses and plans for construction have not yet been determined. As a project-level EIR or project EIR, the environmental analysis primarily focuses on the changes in the environment that would

INTRODUCTION

result from the development of the San Leandro Shoreline Development Project. This Project EIR examines the specific short-term impacts (construction) and long-term impacts (operation) that would occur as a result of Project approval. For a complete listing of environmental topics covered in this Draft EIR, see Chapter 4.0, Environmental Evaluation.

2.3 ENVIRONMENTAL REVIEW PROCESS

2.3.1 DRAFT EIR

Given the magnitude and scope of the Project which relates to the potential for significant impacts on the environment, rather than prepare an Initial Study before preparing an EIR, the City decided to simply prepare a full EIR. In compliance with Section 21080.4 of the California Public Resources Code, the City circulated the Notice of Preparation (NOP) of an EIR for the Project to the Office of Planning and Research (OPR) State Clearinghouse and interested agencies and persons on July 3, 2013, and as a result of Project revisions as described in Chapter 1, Executive Summary, of this Draft EIR, reissued an NOP December 11, 2013 for a required 30-day review period. The NOP solicited comments from identified responsible and trustee agencies, as well as interested parties regarding the scope of the Draft EIR. Appendix A of this Draft EIR includes the reissued NOP as well as the comments received by the City in response to the NOP.

This Draft EIR will be available for review by the public and interested parties, agencies, and organizations for a 60-day comment period, 15 days longer than the required 45-day comment period. This extension has been made to account for the holiday season and to allow the public additional time to review and comment on this Draft EIR. During the comment period, the public is invited to submit written comments on the Draft EIR to the City of San Leandro Community Development Department. Comments should be submitted to:

Sally Barros
Principal Planner
Community Development Department
City of San Leandro
835 East 14th Street
San Leandro, CA 94577
SBarros@sanleandro.org

Written and/or verbal comments on the Draft EIR will also be accepted at a Shoreline Advisory Group meeting, a Planning Commission hearing and City Council work session, for which meeting dates will be legally noticed. Tentative Dates are:

- Shoreline Advisory Group meeting: 6 pm, January 14, 2015 at the Senior Community Center
- Planning Commission public hearing: 7 pm, January 15, 2015 in San Leandro City Council Chambers
- City Council work session: 7 pm, January 26, 2015 in San Leandro City Council Chambers.

2.3.2 FINAL EIR

Upon completion of the 60-day comment period, the City of San Leandro will review all comments received and prepare written responses for each comment. A Final EIR will then be prepared,

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incorporating all of the comments received, responses to the comments, and any changes to the Draft EIR that result from the comments received. The Final EIR will then be considered by the City of San Leandro for certification as the environmental document for the Project. All persons who commented on the Draft EIR will be notified of the availability of the Final EIR and the dates of the public hearings before the City.

All responses to comments submitted on the Draft EIR by agencies will be provided to those agencies at least 10 days prior to certifying the EIR. The City Council will make findings regarding the impacts and mitigations as presented in the Final EIR. The Final EIR will need to be certified as complete by the City prior to making a decision to approve the Project.

The Planning Commission will consider and recommend on the Final EIR and the Project. After the City Council certifies the Final EIR, it will also consider the Project itself, which it may approve, deny, or approve with conditions. The City Council may require the mitigation measures specified in this Draft EIR as conditions of Project approval, and it may also require other feasible mitigation measures. Alternately, the City Council may find that the mitigation measures are outside the jurisdiction of the City to implement, or that there are no feasible mitigation measures for a given significant impact. In the latter case, the City Council may nonetheless determine that the Project is necessary or desirable due to specific overriding considerations, including economic factors, and may approve the Project after weighing its benefits against its unavoidable, significant impacts.

2.3.3 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that the lead agency adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code 21081. Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR. The Mitigation Monitoring Program for the Project will be completed at the time of preparation of the Final EIR.

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3. Project Description

The San Leandro Shoreline Development Project (referred to as the “Project”) is proposed as an integrated master planned development and a public/private partnership between Cal Coast Companies LLC and the City of San Leandro, on 52 acres of the City-owned shoreline and 23 acres of water area. This chapter provides a detailed description of the Project, including the location, setting, characteristics of the site, objectives of the Project, principal features, approximate construction phasing, as well as required permits and approvals. These activities and approvals collectively constitute the “Project” for the purposes of this EIR.

3.1 PROJECT SITE LOCATION AND CHARACTERISTICS

3.1.1 REGIONAL LOCATION

As shown on Figure 3-1, Regional Location, the Project is located in the City of San Leandro, in the San Leandro Shoreline Area. The San Leandro Shoreline Area encompasses approximately 900 acres of mostly City-owned land situated on the eastern shore of the San Francisco Bay at the western end of Marina Boulevard. This area is commonly referred to as the Shoreline Recreational Area. The Shoreline Recreational Area is south of Oakland International Airport and is accessible via Interstate 880, located 1.2 miles east of the Project site.

3.1.2 SURROUNDING LAND USES

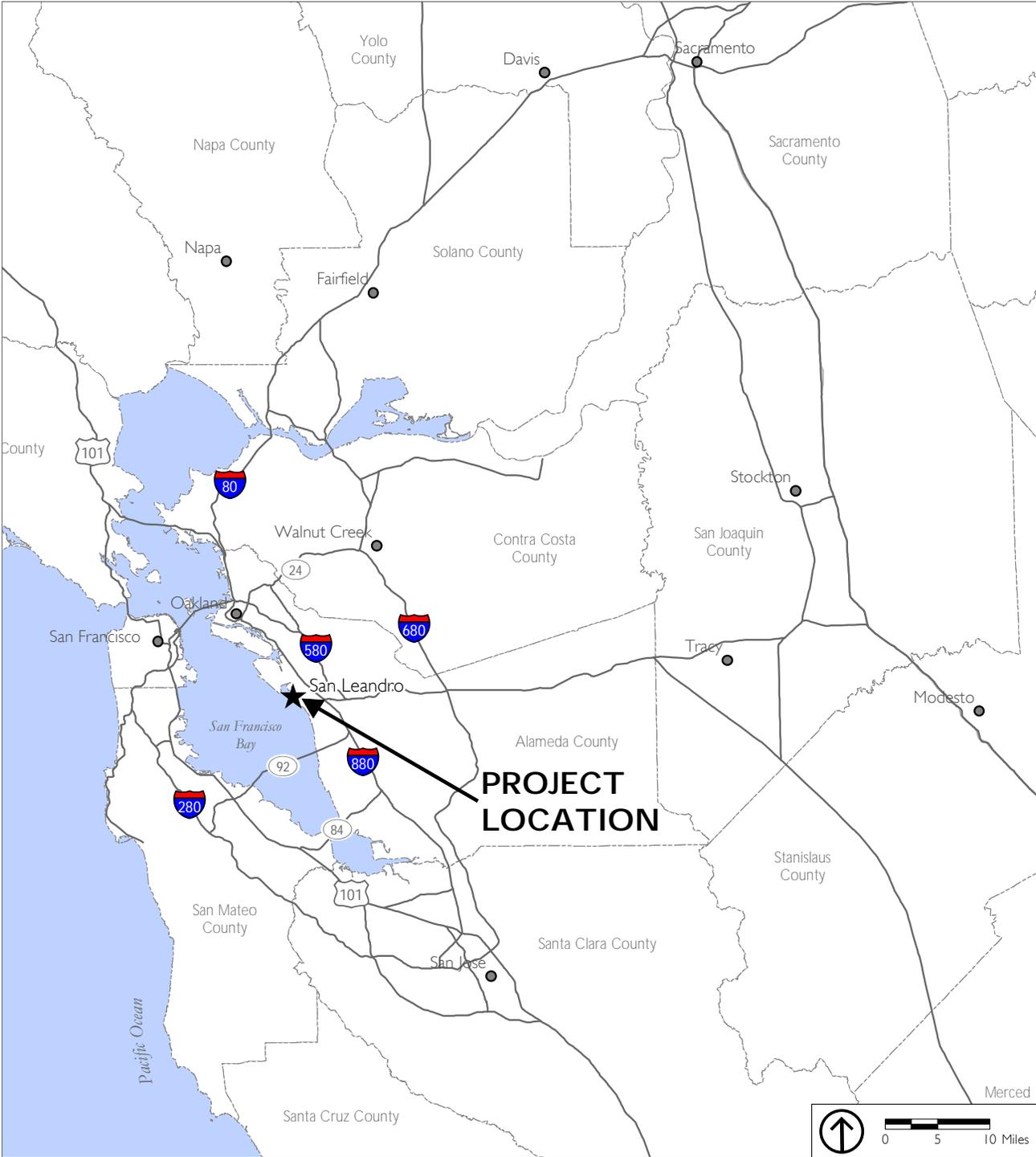
Land uses adjacent to the Project site are described below. As shown in Figure 3-2, Local Context, the San Francisco Bay is located directly west of the Project site.

To the north of the Project site, from west to east, lie the San Francisco Bay and residential uses along Neptune Drive and Marina Boulevard. Residential uses include single-family homes and multi-family residential units within the Mulford Gardens neighborhood. North of the Project site, across an inlet of the San Francisco Bay is East Bay Regional Park District’s Oyster Bay Regional Shoreline, Waste Management’s Davis Street Transfer Station, the City of San Leandro Water Pollution Control Plant, and Oakland International Airport.

The Marina Golf Course (part of the larger Monarch Bay Golf Club) is located on the eastern portion of the Project site, with residential uses located further east along Aurora Drive, West Avenue 133rd, and West Avenue 134th. Residential uses include single-family homes and multi-family residential units. The existing Mulford-Marina Branch Library is located at the corner of Aurora Drive and Fairway Drive. The new Kaiser Permanente San Leandro Medical Center is located approximately one mile to the east, between Marina Boulevard and Fairway Drive on Merced Street.



PROJECT DESCRIPTION



Source: PlaceWorks, 2013.

Figure 3-1
Regional Location

PROJECT DESCRIPTION



Source: PlaceWorks, 2013

Key

-  San Leandro City Limit
-  Project Site

FIGURE 3-2
LOCAL CONTEXT

PROJECT DESCRIPTION

To the south of the Project site, west to east, is the San Francisco Bay, a public boat launch ramp, a small boat lagoon, the City's Marina Park and Par Course, the Tony Lema Golf Course (part of the larger Monarch Bay Golf Club), the Seagate residential community, and the Marina Faire neighborhood.

Located within the Project site to the west of Monarch Bay Drive is Horatio's Restaurant and The Marina Inn on San Francisco Bay (Marina Inn). No modifications are planned for these buildings; however, the adjacent parking lots would be modified as part of this Project resulting from the proposed road alignment.

3.2 GENERAL PLAN LAND USE DESIGNATION AND ZONING

The City of San Leandro General Plan (adopted in 2002) and Zoning Code provide a policy framework to ensure that future development in the City is consistent with its priorities and goals.

3.2.1.1 GENERAL PLAN DESIGNATION

The land use designations for the Project site are General Commercial and Parks and Recreation. The General Commercial designation is characterized by commercial uses providing a broader range of goods and services and serving a broader market than the neighborhood commercial areas. The Parks and Recreation designation denotes land, which is used for active recreational purposes, including neighborhood, community, and regional parks, golf courses, and the recreational amenities at the San Leandro Marina.

Approval of the Project, as described below, would require a General Plan amendment to make the entire site General Commercial.

3.2.1.2 ZONING

The current zoning designation for the site is CR Commercial Recreation. Uses allowed within the CR District include cafés, marine sales and service, park and recreation facilities, full-service restaurants and retail sales.

Approval of the Project, as described below, would involve a rezoning to Commercial Community (CC) with a Planned Development (PD) overlay.

3.3 STATEMENT OF OBJECTIVES

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15124(b), the EIR must identify the objectives sought by the Project.

The objectives of the Project are to:

- Build an economically viable and vibrant mixed-use development which provides needed amenities and services to the residents of the City of San Leandro and creates a regional recreational and commercial destination, including:

PROJECT DESCRIPTION

- A banquet/conference facility for residents and others to hold large parties such as weddings, graduation parties, *quinceañeras*, and other events in San Leandro. The banquet/conference center is also needed to support tournaments at the Tony Lema Golf Course;
 - A limited-service hotel, providing limited food and beverage service to hotel guests and not the general public;
 - Multiple dining options;
 - Housing units responsive to market demands to increase City housing stock, for above-moderate income units¹;
 - Class A office space to attract innovative businesses and quality jobs for the citizens of San Leandro; and
 - An enhanced Library/community building.
- Ensure the Project uses are synergistic and create a regional destination for dining, lodging, entertainment, and recreation.
 - Provide recreation opportunities such as bocce ball courts, a small boat launch and public gathering spaces, a 20-foot-wide public promenade including lookout stations, to increase and enhance the public's access to the Bay.
 - Provide multiple areas for the public to enjoy scenic views and interact with the San Francisco Bay.
 - Enhance connections between the San Leandro's shoreline and the San Francisco Bay Trail.
 - Remove current blight, including the former Blue Dolphin site pillars and fencing and the fenced former Boatworks site.
 - Ensure the redeveloped portion of San Leandro Shoreline complements existing amenities and provides needed connection between the amenities and current shoreline uses.
 - Ensure that development is provided in an environmentally sensitive manner, and promotes the latest trends in energy efficiency.
 - Recognize the economic uncertainty of acquiring future funding for needed on-going channel and harbor dredging, the City's existing debt burden related to past harbor improvements, and the City's desire to plan for a successful transition from the existing blighted use to an environmentally and financially sustainable alternative that maintains the public's access to the harbor basin and San Francisco Bay.

3.4 PROJECT CHARACTERISTICS

Pursuant to the CEQA Guidelines, Title 14 California Code of Regulations, Section 15378(a), the Project is considered a "project" subject to environmental review as its implementation is "an action [undertaken by a public agency], and issuance of a permit or entitlement which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the

¹ Housing units would be to satisfy 2014-2022 Regional Housing Needs Allocation (RHNA) housing target for above-moderate income units of 1,161 units.

PROJECT DESCRIPTION

environment." This Draft EIR compares the construction and operation of the Project with the existing baseline condition, described in detail in each section of Chapter 4.0, Environmental Analysis.

The vision for the Project is to redevelop a portion of the Shoreline Recreational Area with attractive and desirable amenities available to all San Leandro residents, as well as create a regional destination for dining, lodging, entertainment, and recreation.

3.4.1 PROJECT BACKGROUND

This section describes the Project background and the proposed construction of the Project.

3.4.1.1 EXISTING SITE

The Project site includes a total of approximately 75 acres, consisting of 52 acres of land and a water surface area of approximately 23 acres, of the Shoreline Recreational Area. The Project site is generally located along both sides of Monarch Bay Drive between Marina Boulevard and Fairway Drive, with development centered primarily along Monarch Bay Drive. This site consists of two peninsulas, Mulford Point to the north and Pescador Point to the south, that encircle the boat harbor and includes existing commercial and recreational facilities. The Project site also includes portions of the existing 9-hole Marina Golf Course and an existing 2,000 square-foot public library building with a related parking lot.

There are approximately 1,950 existing parking lot spaces throughout the Project site.

The Shoreline Recreational Area includes three existing commercial enterprises and one partially demolished restaurant/banquet facility. These include the 131-room Marina Inn, opened in 1985; Horatio's Restaurant, completed in 1978; and an El Torito Restaurant, which originally opened as part of the Tia Maria chain in 1970. The foundation and deck piers of the former Blue Dolphin Restaurant remain on-site.

Boating facilities currently include a 462-slip public boat harbor with a separate boat launch and support operations, and two private yacht clubs. Due to physical constraints caused by build-up of silt both in the harbor and the 2-mile federal channel, occupancy of the harbor currently stands at less than 30 percent.

There are two vehicular entrances to the Shoreline Recreational Area, one at Marina Boulevard (with direct access to Interstate 880), and a secondary access via Fairway Drive.

3.4.1.2 PROJECT COMPONENTS

The San Leandro Shoreline Development Project is proposed as an integrated master planned development and a public/private partnership with the City and Cal Coast Companies LLC, on a 75-acre Project site, consisting of approximately 52 acres of City-owned shoreline and approximately 23 acres of water area. The Conceptual Site Plan for the Project is shown on Figure 3-3. Cal Coast Companies would build the Project; however, the City is financially responsible for the boat harbor and marina, including long-term maintenance and modifications. The City may enter into an agreement with Cal Coast Companies to finance and construct the waterside redevelopment on behalf of the City; the redevelopment features are included in the public amenities portion of the list below.

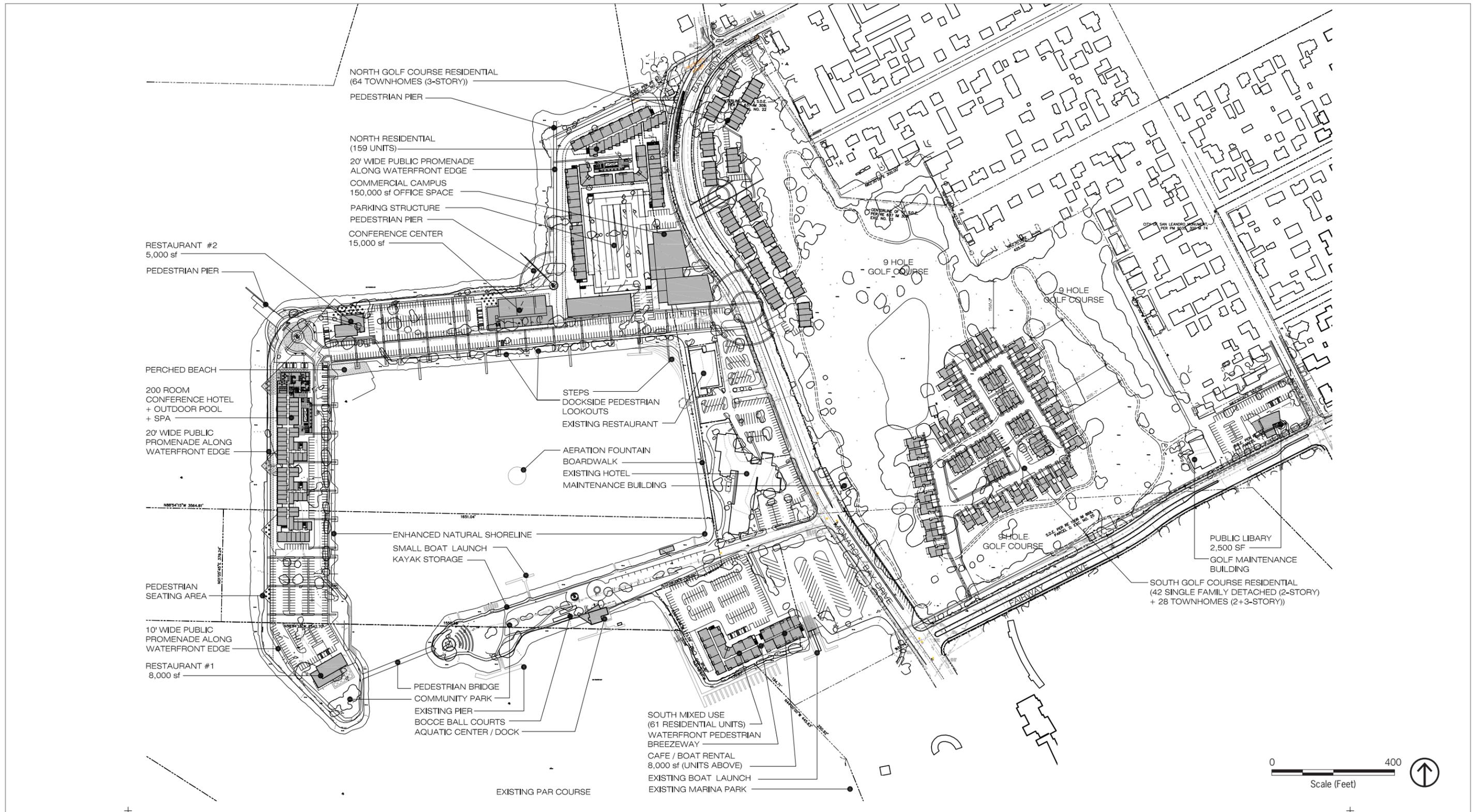


Figure 3-3
Conceptual Site Plan

PROJECT DESCRIPTION

As described in Section 1.2, Summary of the Proposed Project, in Chapter 1 of this Draft EIR, the Marina would be maintained for as long as financially feasible; however, for the purpose of the environmental analysis, it is being assumed that the harbor master's office, fuel pump/dock, and the 462 existing boat slips in the harbor basin would eventually be removed by the City.

The proposed components of the Project include:

- 150,000-square-foot office campus. Envisioned as Class A office space to be flexible and remain competitive with future market conditions.
- 200-room limited-service hotel. The limited-service hotel would provide amenities to guests including a business center, a fitness room, laundry facility, market pantry, an indoor and/or outdoor pool and whirlpool, and small meeting rooms. This hotel is envisioned as an extended-stay facility.
- 15,000-square-foot conference center. The conference center business would be driven by the hotel, local businesses, and other hotels for small conferences and business meetings. Weekend activity would accommodate social events including weddings, anniversaries, graduations and community social events. In general, these events would be booked for Friday evenings after 4:00 p.m. and Saturday evenings after 5:00 p.m.
- 354 housing units:
 - 220 Flats: Of the approximately 220 flats, 61 mixed-use condominiums would be located at the southern boundary of the Project site off of Pescador Point Drive, and 159 market-rate apartments would be located at the northern boundary of the Project site along the San Francisco Bay. Parking for the 61 units would be provided by surface parking lot, and parking for the other 159 units would be provided by a combination of a parking structure and surface parking lot.
 - 92 Townhomes: The approximately 92 townhomes would consist of attached and clustered units, approximately two to three stories in height, located at the northern boundary of the Project site, east of Monarch Bay Drive. Parking for the proposed townhomes would be provided by a combination of garages and surface lots.
 - 42 Single-Family Detached Homes: The proposed single-family residential units would generally be located on the northern corner of Fairway and Monarch Bay Drive. Parking would be provided by garages and surface lots.
- Three new restaurants (totaling 21,000 square feet):
 - Restaurant at the end of Mulford Point: 8,000 square feet
 - Restaurant adjacent to hotel: 5,000 square feet
 - Café and small boat rental south of Horatio's: 8,000 square feet.
- Parking structure (approximately 35 feet (3 stories) in height providing approximately 800 parking spaces supporting office and multi-family residential uses).

Public amenities include the following:

- Approximately 2,500-square-foot community library/community meeting space on the site of the current Mulford-Marina Branch Library
- Aquatic Center/dock on south side of Pescador Point
- Bocce ball courts
- Community outdoor recreational areas (two)

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- Picnic areas
- Perched beach (interior of harbor basin)
- Pedestrian piers
- Public promenade (2 miles in length, with a minimum width of 20 feet)
- Natural shoreline element along the southwest and southeast interior borders of the harbor basin
- Small amphitheater at the end of Pescador Point Drive
- Pedestrian/bicycle bridge across the existing harbor entrance
- Boardwalk/lookout pier
- Dockside pedestrian lookout piers along the interior of the harbor
- Small boat launch in the interior of the harbor
- Kayak storage building in interior of harbor
- Aeration fountain in harbor basin to aid in water circulation
- Existing restrooms 'J/K' (refurbished) located on Pescador Point Road

It is intended that the future basin would be accessible for non-motorized watercraft. As such, a small boat launch and dock is shown on the south side, near the proposed kayak and stand-up paddleboard storage building. The intent is that kayaks, canoes, or stand-up paddleboards could enter the harbor basin either from the natural shoreline in the southeast, or from the new dock, which would be ADA accessible. The location of the existing City boat launch ramp (for motorized boat access, including by emergency responders) at the intersection of Monarch Bay Drive and Pescador Point remains unaffected by the Project; however, improvements such as mixed-use residential units, waterfront pedestrian promenade, and café/boat rental would occur directly adjacent to the existing boat launch, as shown above in Figure 3-3.

The proposed residential units that are located within a portion of the 9-hole Marina Golf Course would require reconfiguration of approximately five of the golf course tees and holes to accommodate construction of the units; however, the course would re-open upon completion of construction.

The Project would require removal of the following structures and features within the Project site:

- Wood and concrete docks and associated piers, including Blue Dolphin Restaurant platform
- Existing El Torito Restaurant building
- Rip-rap along the interior of the harbor
- Existing 2,000 square feet Mulford-Marina Branch Library building
- Marina Golf Course concession stands
- Harbor master's office, fuel pump/dock, and underground storage tank.
- Public/private restrooms 'A', 'E/F', and 'N/O'
- San Leandro Yacht Club building

The Spinnaker Yacht Club building has been identified as the location for the Aquatic Center. The building may be repurposed or replaced.

Vehicle Circulation

The Project proposes to utilize Marina Boulevard, Monarch Bay Drive, and Fairway Drive to provide access to the Project site. The existing roadways within the Project site, Mulford Point Drive and Pescador Point Drive would be reconfigured as shown on Figure 3-2. Mulford Point Drive would be replaced with a

PROJECT DESCRIPTION

driveway that provides access to surface parking on Mulford Point, and Pescador Point Drive would be shortened to allow for park amenities

Parking

The Project proposes construction of 2,057 surface and structured parking spaces to provide parking for the office campus, conference center, retail and mixed-use, restaurant, hotel, library, and boat rental uses. These will replace the approximately 1,950 existing parking spaces located within the San Leandro Recreational Area. As a result, the Project proposes approximately 100 net new parking spaces. Table 3-1 shows the expected distribution of parking spaces.

TABLE 3-1 PROPOSED PARKING DISTRIBUTION

Location/Use	Parking Spaces	Parking Type
Restaurant #1	60	Surface
Restaurant #2	30	Surface
Hotel	320	Surface
Conference Center	200	Surface/Structure
Commercial Office Space	500	Structure
North Residential	308	Structure
South Mixed-Use	158	Surface
North Golf Course Residential	160	Surface/Garage
South Golf Course Residential	241	Surface/Garage
Public Library	80	Surface
Total	2,057	

Source: Cal Coast Companies LLC, 2014.

Pedestrian and Bicycle Circulation

The proposed public promenade is a 2-mile-long pedestrian path along the waterfront edge and would also provide a Class I bicycle path. Class II bicycle lanes on Monarch Bay Drive would be installed between Neptune Drive and Fairway Drive.

A network of dockside pedestrian lookouts would be constructed along the interior of the marina, as well as a pedestrian bridge providing access between Pescador Point and Mulford Point.

Sidewalks on both sides of Monarch Bay Drive between Mulford Point Drive and Fairway Drive would be constructed in order to provide continuous pedestrian pathways. Marked crosswalks on Monarch Bay Drive would be installed at Mulford Point Drive, Pescador Point Drive, and Fairway Drive. In addition, marked crosswalks and other crossing features would also be installed at Neptune Drive and at the conceptual location of the middle driveway of the North Golf Course Residential/Parking Structure Access.

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Stormwater

The Project site is connected to the City's storm drain system, and would be required to comply with Provision C.3 of the Municipal Regional Stormwater Permit in order to reduce post-construction stormwater pollutants.² Compliance with Provision C.3 could include, but not limited to, incorporation of Low Impact Development practices, such as the use of bioswales, infiltration trenches, media filtration devices, pervious surface treatments, and bioretention areas.

Water Supply

The Project would continue to be provided with water services from the East Bay Municipal Utility District (EBMUD). Although existing infrastructure would be preserved in place where feasible, some infrastructure would potentially be relocated to the public right-of-way. In addition, extensions would be installed to provide water service to structures proposed by the Project.

Sanitary Sewer Service

The Project site would continue to be provided with sanitary sewer services by the City of San Leandro. As development occurs, extensions would be installed to provide sanitary sewer service to structures proposed by the Project, in addition to the potential relocation of some of the existing infrastructure to accommodate the Project.

Utilities

Electricity and natural gas would be supplied to the Project site by Pacific Gas & Electric (PG&E). Solid waste generated by the Project would be managed by the City's waste hauler franchisee, which is currently Alameda County Industries.

3.4.2 CONSTRUCTION PHASING

The anticipated construction phasing (dependent on market forces) for the Project will be as follows:

3.4.2.1 GRADING

Grading activities would generally occur during Phase 1 and Phase 2. Proposed development occurring on areas of existing surface parking lots (Phase 1 and Phase 3) would occur at one time, and proposed development occurring on the existing golf course (Phase 2) would occur during the start of that phase.

3.4.2.2 PHASE 1

- 200-room limited-service hotel (inclusive of pool).
- 15,000-square-foot conference center.

² San Francisco Regional Water Quality Control Board (Region 2) Municipal Regional Stormwater Permit (Order No. R2-2009-0074) and NPDES Permit No. CAS612008, as amended by Order No. R2-2011-0083.

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- 5,000-square-foot full-service restaurant.
- 8,000-square-foot full-service restaurant.
- Between 50,000 and 100,000 square feet of office along Monarch Bay Drive and an 800-space parking structure, which would be shared with residential units. The office will be approximately 40 feet in height and the parking structure will depend on parking counts, but no more than 32 feet in height.
- Up to 159 multi-family rental units. A mixed-use building (30,000-square-foot) containing a café/boat rental facility (8,000 square feet) and up to 61 condominium units on the former Boatworks site.
- An approximately 2,500-square-foot Library/Community Building.
- Associated infrastructure.
- Removal of wood and concrete docks and associated piers, including Blue Dolphin Restaurant platform
- Removal of the existing El Torito Restaurant building
- Removal of the San Leandro Yacht Club building
- Removal of public/private restrooms 'A', 'E/F', and 'N/O'
- Removal of harbormaster's office, fuel pump/dock, and underground storage tank.

3.4.2.3 PHASE 2

- 64 2- to 3-story townhomes built on Monarch Bay Drive.
- 70 homes on Fairway Drive built within the redesigned Marina Golf Course:
 - Up to 42 2-story single-family detached homes.
 - Up to 28 townhomes.
- Associated infrastructure.
- Removal of golf course concession stands

3.4.2.4 PHASE 3

- The balance of the 150,000 square feet of office (unless the market allows it to be absorbed during Phase 2). The parking structure will already have been built during Phase I.
- Associated infrastructure.

3.5 REQUIRED PERMITS AND APPROVALS

The City of San Leandro is the Lead Agency for the preparation and certification of the EIR. Responsible, trustee and other agencies will be consulted during the EIR process, Subsequent development entitlements for the Project will require approval of State, federal, and regional responsible and trustee agencies that may rely on the EIR for decisions in their areas of expertise.

The Project will also require a series of planning entitlements, including a General Plan amendment to change the land use designation from General Commercial and Parks/Recreation to General Commercial;

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and a Rezone from CR Commercial Recreation to CC Commercial Community with a Planned Development Overlay, CC (PD) (see Table 3-2). These entitlements will be considered by the Planning Commission (recommending body) and City Council. Subsequent approvals to evaluate the design of the buildings, site plan, and landscape plans will be processed through the City’s Site Plan Review entitlement before the Planning Commission (recommending body) and City Council. Additionally, the City anticipates that the Project will require approvals/permits from responsible, trustee and other federal, State, and regional agencies, including but not limited to the San Francisco Bay Conservation and Development Commission (BCDC), the Army Corps of Engineers, Regional Water Quality Control Board (RWQCB) (San Francisco Bay Region), California Department of Fish and Wildlife and others, as appropriate.

Table 3-2 lists the approvals and permits for the Project:

TABLE 3-2 PERMITS AND APPROVALS

Jurisdiction	Permits/Approval
City of San Leandro	General Plan Amendment to General Commercial Zoning amendment to Commercial Community (CC) with a Planned Development Overlay (PD) Development Agreement Subdivision Map Site Plan Review Development Plan and Design Guidelines Demolition Permits Grading Permits Building Permits Underground Storage Tank Removal Permit National Pollution Discharge Elimination System (NPDES) certification/ Stormwater Pollution Prevention Plan Encroachment permits
San Francisco Bay Conservation and Development Commission (BCDC)	Major Permit
Regional Water Quality Control Board (RWQCB)	Section 401 Clean Water Quality Certification Waste Discharge Requirements (WDR) permit (for any dewatering activities)
Army Corps of Engineers (USACE)	Section 404 Permit
California Department of Fish and Wildlife	Section 2081(b) Permit CDFW Section 2081 Incidental Take Permit
Bay Area Air Quality Management District (BAAQMD)	J Number for Demolition

4. *Environmental Analysis*

This chapter of the Draft EIR is made up of 14 sub-chapters. This introduction describes the organization of this Draft EIR and the assumptions and methodology of the cumulative impact analysis. The remaining 14 sub-chapters evaluate the direct, indirect, and cumulative environmental impacts of the Project. The potential environmental effects of the Project are analyzed for the following environmental issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation and Traffic
- Utilities and Service Systems

Due to the past and current uses of the Project site, as well as site characteristics, no environmental impacts associated with agricultural and forestry resources and mineral resources are expected to occur as a result of the Project. These resource topics will not be addressed further in the Draft EIR.

CHAPTER ORGANIZATION

This chapter consists of 14 sub-chapters that evaluate the environmental impacts of the proposed San Leandro Shoreline Development Project. Each issue area uses generally the same organization and consists of the following subsections:

- The *Regulatory Framework* section describes which local, State and/or federal regulations are applicable to the Project.
- The *Existing Conditions* section describes current conditions with regard to the environmental issue area reviewed.
- The *Thresholds of Significance* section describes how an impact is judged to be significant in this Draft EIR. These standards are derived from CEQA Appendix G Guidelines unless stated otherwise. Where applicable, this section includes a subsection that describes thresholds that are not further discussed because the respective threshold does not apply to the Project and an impact discussion is not warranted in the Draft EIR.

ENVIRONMENTAL ANALYSIS

- The *Impact Discussion* assesses potential impacts (direct and indirect), and explains why impacts were found to be significant or less than significant.
- The *Cumulative Impact Discussion* section analyzes impacts that the Project may have when considered in addition to other past, present and reasonably foreseeable projects. (See further discussion below.)
- The *Summary of Impacts and Mitigation Measures* section numbers and lists identified impacts, and presents measures that would mitigate each significant impact. In each case, the significance following mitigation is also explained.

ASSUMPTIONS AND METHODOLOGY REGARDING CUMULATIVE IMPACTS

A cumulative impact consists of an impact created as a result of the combination of the project evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable."

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 incremental effect is not cumulatively considerable. Where the cumulative impact caused by the project's incremental effect and the effects of other projects is not significant, the EIR must briefly indicate why the cumulative impact is not significant.

The cumulative discussions in sub-chapters 4.1 through 4.14 explain the geographic scope of the area affected by each cumulative effect (e.g. immediate project vicinity, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing aesthetic impacts, only development within the vicinity of the Project site would contribute to a cumulative visual effect since the Project site is only visible within the vicinity of the site. In assessing macro-scale air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions is the best tool for determining the cumulative impact.

The CEQA Guidelines provide two approaches to analyzing cumulative impacts. The first is the "list approach," which requires a listing of past, present and reasonably anticipated future projects producing related or cumulative impacts. The second is the projections-based approach wherein the relevant growth projections contained 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 combination of the two permissible approaches, with the applicable list of projects shown in Table 4-1. The cumulative analysis discussions contained in Chapters 4.1 through 4.14 include a discussion of the growth projections and references to specific projects as relevant to the impact analysis as of August 2014.

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TABLE 4-1 CUMULATIVE PROJECTS LIST

Project Number	Project Name	Description
Residential		
PLN2009-00006-2450	Washington Avenue Apartments	Planned Development, GP Amendment and Rezone for 66 dwelling units (48 two-bedroom and 18 one-bedroom units) and a community building on approximately 2.85 acres. <i>Approved October 20, 2011; Development Agreement allows for 5-year term with another 5-year renewal; no building permits applied for at this time.</i>
PLN2008-00030	BRIDGE Housing Cornerstone Apartments, 1400 San Leandro Boulevard	Site Plan Review approval for 200-unit apartments and approximately 5,000 square feet of commercial space. <ul style="list-style-type: none"> ▪ Phase 1: 115 rental units for families – 8 studios, 49 1-bedrm, 22 2-bedrm and 36 3-bedrm ▪ Phase 2: 85 rental units for seniors – 77 1-bedrm and 8 2-bedrms <i>Approved March 1, 2013; project under construction as of December 1, 2014.</i>
PLN2012-00039	Aurora Cottages, 13533-13547 Aurora Drive	Planned Development approval for six new two-family residences (12 new 3-bedroom units) on the site of four existing single-family dwellings. The project totals 16 residential units. <i>Approved February 4, 2013; building permits have been reviewed and are ready to issue.</i>
PLN2014-00019	Tam Duplexes	Site Plan Review for 3 new duplexes for a total of 6 dwelling units (all 3-bedroom units.) <i>Approval is pending; application is currently incomplete.</i>
Office/Other		
PLN2010-00032	Heritage Baptist Church	Planned Development to allow the construction of additional related structures to add 24,020 square feet of new floor area for the existing congregation. <i>Approved October 20, 2011; building permit issued for Phase I (11,108 sf of space) on November 13, 2013 and is under construction. Building permits for Phase II (remaining approx. 13,000 square feet) are anticipated within 18 months. Note that the premise upon which this was approved was that this would serve the existing congregation and no expansion of the existing use (in terms of outside rentals, establishment of an ancillary use such as a school or day-care) was allowed per the Conditions of Approval.</i>
PLN2013-00045	Westlake Office Complex, 1333 and 1696 Martinez Street	Approval of a Planned Development and Site Plan Review for 340,000 square feet, and up to a maximum of 500,000 square feet of office floor area. Term of the Development Agreement allows for a period of ten (10) years, with one automatic extension for another five (5)-year term upon completion of Phase 1. Phase 1 would include a minimum six-story 120,000 square foot building with surface parking at a maximum ratio of 3.6 spaces per 1,000 square feet of office area. Phase 2 would include a minimum six-story, 120,000 square foot building and a parking structure to accommodate a sufficient amount of parking spaces for Phase 2 and potentially for the future Phase 3. A two-story parking deck scenario would provide approximately 846 total spaces (or 3.3 spaces per 1,000 square feet of office area.). A three-story parking deck scenario would provide approximately 1,065 total spaces (or 4.2 spaces per 1,000 square feet of office area). Phase 3 would include a minimum five-story 100,000 square foot building with a parking ratio of 3.0 spaces per 1,000 square feet of office area. A 3.5 garage deck above grade parking scenario would provide approximately 1,133

ENVIRONMENTAL ANALYSIS

TABLE 4-1 CUMULATIVE PROJECTS LIST

Project Number	Project Name	Description
		total spaces (or 3.1 spaces per 1,000 square feet of office area.). A five-story parking structure scenario would provide approximately 1,651 total spaces (or 4.5 spaces per 1,000 square feet of office area.). In the event the project is built out to 500,000 square feet, the parking ratio would be 3.3 spaces per 1,000 square feet of office area. <i>Approved April 21, 2014. Building permits issued and construction scheduled to start mid-December 2014.</i>
Manufacturing/Warehouse		
PLN2010-00026	Waste Management of Alameda County, 2615 Davis Street	Site Plan Review to construct the build-out of the Davis Street Transfer Station Master Plan Improvements, approved as a Conditional Use Permit in February 1998 under CU-96-1, with six facilities totaling approximately 353,000 square feet, including: <u>Phase I:</u> <ul style="list-style-type: none"> ▪ Food Waste/Organics Recycling Facility ▪ Employee Building ▪ Single Stream Expansion Line (New SS Expansion) <u>Phase II:</u> <ul style="list-style-type: none"> ▪ Food Waste/Organics/Green Waste Compost Facility <u>Phase III:</u> <ul style="list-style-type: none"> ▪ Public Receiving (Disposal) Enclosure ▪ Overhead Conveyance System ▪ Alternate Fuel (Clean Air) Retrofit ▪ Vehicle Maintenance (Note that this project does not increase the allowable tons per day over what is currently approved under CU-96-1. It just allows for the enclosure of the existing processes and adds the processing component of composting of green waste and conversion to fuel.) <i>Approved January 4, 2011; building permits under review for the Alternate Fuel (Clean Air) Retrofit</i>
PLN2013-00066	Marathon Packing, 1000 Montague Street	Site Plan Review for addition of approximately 35,860 square feet to an existing packaging facility of 36,500 square feet, and a new detached storage building of approximately 3,200 square feet. <i>Approved February 6, 2014; no building permits submitted to-date.</i>
PLN2014-00019	Scandic Springs Manufacturing, 700 Montague Street	Site Plan Review for addition of 12, 214 square feet of manufacturing space to an existing 22,750 square feet manufacturing facility. <i>Approved August 12, 2014; no building permits submitted to-date.</i>
PLN2014-00028	1717 Doolittle Drive	Site Plan Review application has been submitted in August 2014 for a 161,000 square feet warehouse distribution building.
Long Range or Potential Projects		
N/A	Future Bay Fair Transit Village TOD Plan	City received funding from MTC to conduct a PDA plan by late 2016 to complete the planning for the transit village; there is no “live” application for a development at this time. A TOD study finalized in March 2007 by BART (Bay Fair BART Transit Oriented Development and Access Plan) contemplated 620 to 860 new residential dwelling units.
N/A	1900 Marina Boulevard & 620-740 Marina Boulevard	Developers have made preliminary inquiries regarding potential conversion of these two sites to residential mixed-use. However, both sites are zoned Industrial and would require a General Plan Amendment; as such, these proposals are highly unlikely.

Source: City of San Leandro, December 2014.

4.1 AESTHETICS

This chapter discusses the existing aesthetic character of the Project site and its surroundings, and evaluates the potential impacts to aesthetics associated with development of the Project. The following evaluation assesses visual character, scenic vistas, scenic highways, and light and glare. The aesthetics evaluation in this EIR is based in part on visual simulations prepared by the EIR consultant.

4.1.1 ENVIRONMENTAL SETTING

4.1.1.1 REGULATORY FRAMEWORK

This section summarizes key State and City regulations and programs related to aesthetics at the Project site. There are no specific federal regulations applicable to aesthetics.

San Leandro General Plan

The City of San Leandro General Plan was adopted in 2002 and contains a vision for San Leandro through the year 2015 including policies and actions to help achieve that vision. The San Leandro General Plan¹ in its Land Use, and Historic Preservation and Community Design Elements, contain goals and policies applicable to the aesthetics of the Project site, as summarized in Table 4.1-1. These goals and policies identify some of the methods for maintaining and enhancing the visual character and qualities of the City of San Leandro, particularly related to the Project site and the surrounding area.

The San Leandro General Plan details a particular vision for certain “focal points” in the City of San Leandro, including the San Leandro Marina, which is the location of the Project. The San Leandro Marina is designated as a focal point because it is the centerpiece of the City’s largest recreation area.² As indicated in the San Leandro General Plan, the site “offers unique opportunities for new commercial uses that take advantage of the waterfront location, panoramic views, and proximity to nearby recreational amenities.”³ Aesthetic values are often highly subjective; however, this San Leandro General Plan language identifies key elements of the site’s aesthetic character. Additionally, because the Marina is referred to as the “crown jewel” in the City’s park system, the Land Use Element calls for future development to maintain high standards of quality.

The Historic Preservation and Community Design Element contains designated views, major gateways, key gateway streets, and activity centers, all of which are intended to build on the sense of place in the city. These elements are shown in Figure 4.1-1, which was taken from the Historic Preservation and Community Design Element of the San Leandro General Plan. As seen in Figure 4.1-1, the San Leandro General Plan identifies a significant view from the Project site across the harbor and towards the San Francisco Bay.

¹ Note: The City of San Leandro *General Plan 2002* was amended in 2001 to update the Housing Element.

² City of San Leandro, *General Plan 2002*, Land Use Element, Chapter 3.3 Business and Industry, page 3-98.

³ City of San Leandro, *General Plan 2002*, Land Use Element, Chapter 3.3 Business and Industry, page 3-98.



Source: San Leandro General Plan Update, 2002.

-  Significant Views
-  Major Gateways
-  Key Gateway Streets
-  Well-defined edges
-  Major Activity Areas

Figure 4.1-1
Community Design Features

AESTHETICS

TABLE 4.1-1 SAN LEANDRO GENERAL PLAN POLICIES RELEVANT TO AESTHETICS

Goal/Policy Number	Goal/Policy Text
Land Use	
Policy 2.08	<i>Privacy and Views-</i> Encourage residential alterations, additions, and new homes to be designed in a manner that respects the privacy of nearby homes and preserves access to sunlight and views. Wherever feasible, new or altered structures should avoid the disruption of panoramic or scenic views.
Policy 8.03	<i>Aesthetics-</i> Upgrade the City’s commercial corridors by building upon their existing strengths and improving their aesthetic qualities. The City should implement programs to underground utilities, abate weeds and graffiti, eliminate litter, improve buffers to adjacent residential uses, control excessive signage, and provide streetscape amenities and landscaping along the corridors.
Policy 9.06	<i>Gateway Improvements-</i> Encourage “gateway” improvements which enhance the approach routes to the Marina while minimizing the impacts of increased traffic on area neighborhoods. Improvements could include new signage, streetscape enhancement along Marina Boulevard and Fairway Drive, entry monuments and landscaping at the Marina itself, and longer-term circulation changes.
Policy 9.07	<i>Urban Design-</i> Encourage cohesive urban design and high-quality architecture at the Marina. Buildings should be oriented to maximize water views and shoreline access. Architecture, signage, lighting, street furniture, landscaping, and other amenities, should be coordinated to achieve an integrated design theme.
Historic Preservation and Community Design	
Goal 42	<i>Sense of Place-</i> Promote a stronger “sense of place” in San Leandro.
Policy 40.04	<i>Commemorative Art-</i> Promote murals, monuments, statues, and other forms of public art that commemorate San Leandro history and culture. Such projects should be incorporated in public buildings and major public works projects wherever feasible.
Policy 42.01	<i>Gateways-</i> Develop landscaped gateway features to identify neighborhoods, business districts, and major city entryways. Gateways should incorporate design and graphic themes that help define a unique identity for each neighborhood and district.
Policy 42.03	<i>Urban Design Improvements-</i> Use urban design elements such as bollards, pavers, fountains, signage, tree lighting, and street furniture (newspaper racks, benches, bus stops, planters, trash receptacles, bike racks, etc.) to establish a stronger design identity for San Leandro’s commercial areas and make the street environment more inviting for pedestrians.
Policy 42.04	<i>Architectural Consistency-</i> In established neighborhoods, protect architectural integrity by requiring infill housing, replacement housing, and major additions or remodels to be sensitive to and compatible with the prevailing scale and appearance of adjacent development.
Policy 42.07	<i>Visual Landmarks-</i> Promote the development of “signature” buildings and monuments that provide visual landmarks and create a more distinctive and positive impression of San Leandro within the greater Bay Area. Local design guidelines should ensure that such buildings and monuments respect the character, scale, and context of the surrounding area.
Goal 43	<i>Quality Construction and Design-</i> Ensure that new construction and renovation contributes to the quality and overall image of the community.
Policy 43.01	<i>Promoting Quality Design-</i> Use the development review and permitting processes to promote high quality architecture and site design. Design review guidelines and zoning standards should ensure that the mass and scale of new structures are compatible with adjacent structures.
Policy 43.02	<i>Architectural Diversity-</i> In newly developing neighborhoods, promote architectural diversity and variety. Encourage variations in lot sizes, setbacks, orientation of homes, and other site features to avoid monotony and maintain visual interest.
Policy 43.03	<i>Multi-family Design-</i> Establish high standards of architectural and landscape design for multi-family housing development. Boxy or massive building designs should be avoided, ample open space and landscaping should be provided, and high quality construction materials should be used.
Policy 43.04	<i>Permitting and Inspection-</i> Maintain building inspection and code enforcement procedures that ensure that all construction is properly permitted, and that construction is completed as approved.
Policy 43.05	<i>Craftsmanship-</i> Encourage a high level of craftsmanship in new construction, and the use of exterior materials and façade designs that enhance the appearance of the City.

AESTHETICS

TABLE 4.1-1 SAN LEANDRO GENERAL PLAN POLICIES RELEVANT TO AESTHETICS

Goal/Policy Number	Goal/Policy Text
Policy 43.06	<i>Architectural Interest</i> - Encourage new structures to incorporate architectural elements that create visual interest such as trellises, awnings, overhangs, patios, and window bays. Avoid solid or blank street-facing walls.
Policy 43.07	<i>Commercial and Industrial Standards</i> - Improve the visual appearance of the City's commercial and industrial areas by applying high standards of architectural design and landscaping for new commercial and industrial development and the re-use or remodeling of existing commercial and industrial buildings.
Policy 43.08	<i>Signage</i> - Encourage commercial signage that is compatible with the building and streetscape, enhances the character of the surrounding area, and is not intrusive to nearby residential areas.
Goal 44	<i>A More Visually Attractive City</i> - Create a more visually attractive City, with well-landscaped and maintained streets, open spaces, and gathering places.
Policy 44.01	<i>Greening San Leandro</i> - Promote landscaping, tree planting, and tree preservation along San Leandro streets as a means of improving aesthetics, making neighborhoods more pedestrian-friendly, providing environmental benefits, and creating or maintaining a park-like setting.
Policy 44.03	<i>Tree Removal and Replacement</i> - Discourage the removal of healthy trees and require replacements for any trees that are removed from street rights-of-way. Where healthy trees must be removed, consider their relocation to other suitable sites instead of their disposal. Encourage the preservation and proper care of mature trees throughout the City, particularly those which may have historic importance or contribute substantially to neighborhood character.
Policy 44.04	<i>Urban Open Space</i> - Encourage the incorporation of landscaped open spaces, such as plazas, courtyards and pocket parks, within new development and redevelopment projects.
Policy 44.05	<i>Street Beautification</i> - Upgrade the City's commercial thoroughfares by building upon their existing strengths and improving their aesthetic qualities. The City should implement programs to underground utilities, abate weeds and graffiti, eliminate litter, improve buffers to adjacent residential uses, prohibit excessive or out-of-scale signage, remove billboards, and provide streetscape amenities and landscaping along these thoroughfares.
Policy 44.06	<i>Public Art</i> - Encourage the siting of public art in civic open spaces, around public buildings, and within new development areas. Public art should reflect and express the diversity of the City.
Policy 44.07	<i>Lighting</i> - Encourage street and parking lot lighting that creates a sense of security, complements building and landscape design, is energy-efficient, and avoids conflicts with nearby residential uses.

Views are important to the character of San Leandro, particularly in the Marina area where panoramic views of the Bay and other landmarks are visible. Gateways are intended to distinguish San Leandro from surrounding cities as well as to distinguish the distinct neighborhoods within San Leandro. Activity centers, like the San Leandro Marina, are places in the community where people gather. Building and landscape design in these areas are meant to be oriented toward a pedestrian-friendly environment.

City of San Leandro Zoning Code

The City of San Leandro Zoning Code contains several chapters that address aesthetic issues related to the Project. The Project site is currently zoned as a Commercial Recreation (CR) District but upon Project approval the site would be designated as Commercial Community (CC) with a Planned Development (PD) overlay. In Section 2-600, the Zoning Code states that the CC district is intended to provide sites for commercial centers containing a wide variety of commercial establishments. Uses including entertainment, restaurants, hotels and motels are permitted, subject to certain limitations necessary to avoid adverse impacts on adjacent uses.

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The PD overlay is meant to establish a procedure for developing larger parcels, by way of eliminating rigidity and inequities that otherwise would result from a strict application of the zoning code and procedures which are designed primarily for smaller parcels (Section 3-1000). Additionally, the PD overlay would ensure thorough review procedures, encourage variety, avoid monotony, provide a mechanism for considering a variety of uses, encourage the allocation of improvements to public open space, and encourage the assembly of properties that might otherwise be developed in unrelated increments to the detriment of surrounding neighborhoods.

The Zoning Code contains a variety of development standards and required review processes applicable to the Project which pertain to aesthetics and are intended to preserve the character of the community, protect scenic resources, and prevent adverse impacts related to light and glare. In the base district, CC, development standards allow for a maximum height of 50 feet, a maximum floor area ratio (FAR) of 0.5, a minimum front setback of 10 feet, a minimum corner side setback of 10 feet and no required setback for interior side and rear yards. Additionally, a landscaped setback with a minimum depth of ten feet would be required to be provided within the front and corner side yards, and a minimum of 10 percent of the entire site must be landscaped. In order to prevent large blank walls, buildings over 25 feet in height with walls that extend longer than 100 feet, must provide architectural details such as offsets, recesses, reveals, window patterns, columns, or pilasters. Residential development in the CC district is subject to the same standards for height, density, and open space as would apply to residential development in the RM-2000 (22 dwelling units per acre) zone. The specific regulations for residential development are contained in sections 2-528, 2-540, and 2-558 of the Zoning Code. For the purposes of this Draft EIR, detailed site plans and architectural elevations that will be submitted for Site Plan Review will be evaluated under the Planned Development with respect to the CC district development standards.

Article 25 of the Zoning Code contains the regulations which apply to the City's review of development proposals. Under the proposed rezoning, a site plan would be required prior to the issuance of a building permit. The associated Site Plan Review regulations are contained in Section 5-2512 of the Zoning Code. This review would evaluate adherence to the standards discussed above, including height, setbacks, landscaping, and several other standards. Additionally, this review would confirm that buildings have adequate articulation, with appropriate window placement, use of detailing, or changes in building planes which provide visual interest. A public hearing before the Planning Commission and also one before the City Council would be required in accordance with the regulations pertaining to the Planned Development overlay. In addition to the review criteria listed above, the Planning Commission's review would also ensure that the development is compatible with its surroundings, and in conformance with the applicable policies in the Land Use Element including those listed above which pertain to aesthetics, views, gateways, and urban design.

City of San Leandro Municipal Code

Chapter 7-5, Building Code, of the San Leandro Municipal Code is based on and incorporates 2013 California Building Standards Code and sets forth provisions for building standards for development within the city. The Municipal Code establishes building standards for construction of things such as pedestrian walkways, seismic reinforcing, and soils and foundations.

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CAL Green

California Green Building Standards Code of the California Code of Regulations, Title 24, Part 11, known as CALGreen, establish building standards aimed at enhancing the design and construction of buildings through the use of building concepts that have a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. CALGreen includes standards for planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. Specifically, Section 5.106.8, Light Pollution Reduction, establishes Backlight, Uplight, and Glare (BUG) ratings to minimize the effects of light pollution for nonresidential development.

4.1.1.2 EXISTING CONDITIONS

Visual Character

Landscape and Visual Character of the Site and Surroundings

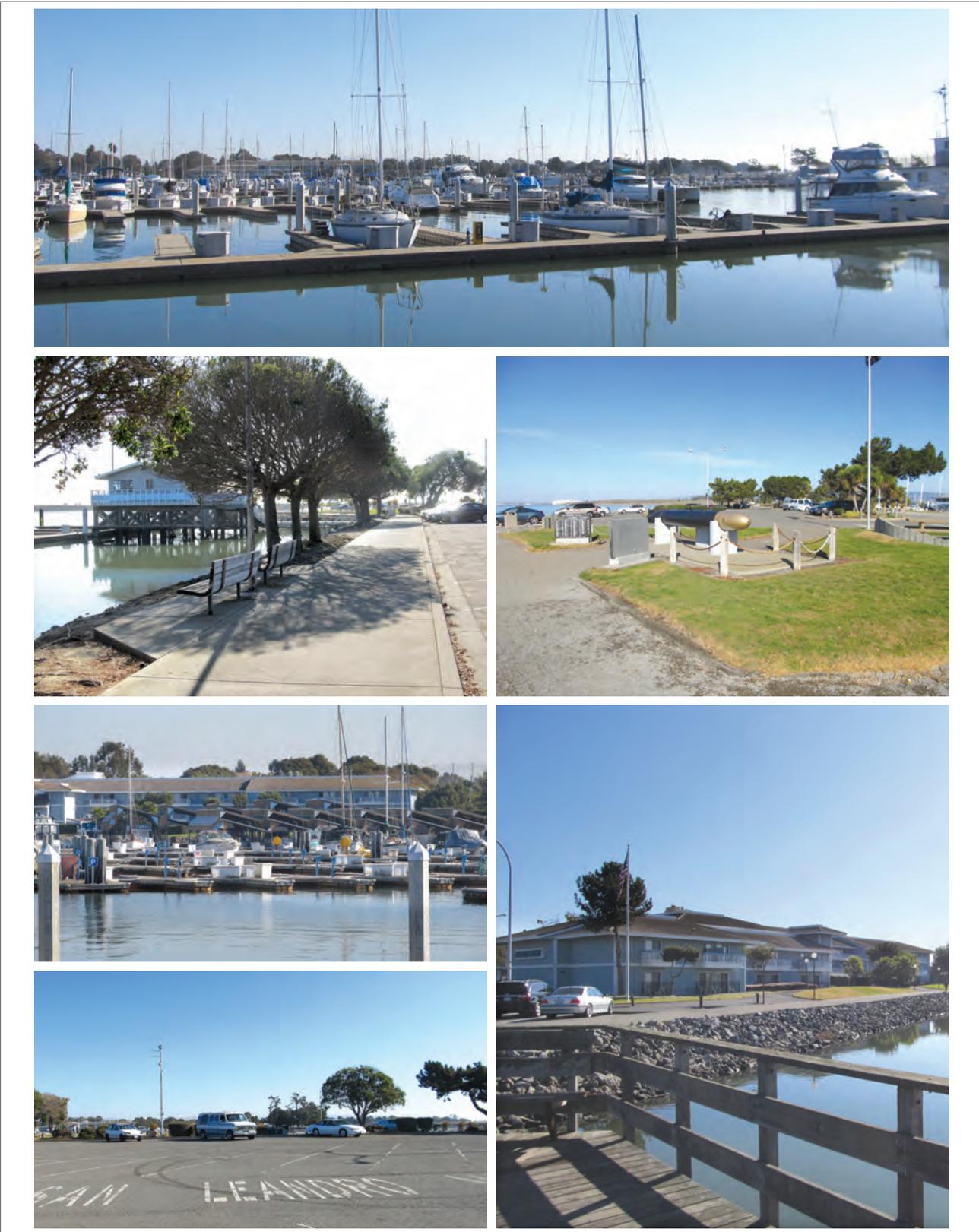
The Project site contains an aging marina which, at this time, is largely suffering from blight. As a result, the relatively flat site consists of a large amount of vacant parking space, small wooden buildings associated with marine uses, docks and piers (some of which are in a state of disrepair), the vacant Blue Dolphin and Boatworks sites, the currently operating Marina Inn, Horatio's restaurant, El Torito, San Leandro Yacht Club, Spinnaker Yacht Club, and the Mulford-Marina Branch Library. A portion of the site at the southern end is unpaved and vacant (Boatworks site). Additionally, there are a variety of recreation and leisure facilities including bicycle and pedestrian paths, the nine-hole Marina Golf Course (including two relatively large water features), benches, picnic tables, barbecues, grass covered open space, trees, small and large boat launches, and observation points. Although there are existing public amenities such as benches, open space, and landscaped areas, an overall defined character is lacking and generally uninviting. Along the path of the outer boundary of the Project site along the water's edge, there are no public benches or areas for seating. Currently the 462-slip public boat harbor is at 30 percent occupancy which contributes to the underutilized character of the site. However, the presence of the boats in the harbor provide an attractive aspect to the character of the site since it provides a visual link to the San Francisco Bay, and contributes to the overall character of the marine environment in the area. In addition, the site contains a public art installation as well as commemorative displays.

The character of the site is also impacted by the adjacent uses and the character of those sites. Views of the Project Site are shown in Figure 4.1-2. Residential uses in the Marina area generally encompass neighborhoods to the northeast and east, including the Mulford Gardens, Marina Faire, Little Alaska, and the Seagate and Marina Gardens developments. These areas generally comprise of dense tree canopy, large lots, remnant farms, and an eclectic mix of older and newer homes.⁴ To the south and southeast are recreation uses in the form of Marina Park and the Tony Lema 18-hole Golf Course, as well as the Marina Faire neighborhood and Heron Bay neighborhood further to the south. These areas are characterized by the large amount of open space in the area and the pedestrian-oriented amenities including several walking and biking paths, part of which is a segment of the San Francisco Bay Trail.

⁴ City of San Leandro, *General Plan*, page 3-25.



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Source: PlaceWorks, 2014.

Figure 4.1-2
Views of the Project Site

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The Marina Faire neighborhood includes some newer homes, including several two-story homes. Heron Bay was developed in the mid-1990s with a combination of small-lot single-family homes and garden court-type residential units. To the west is the San Francisco Bay. Uses further out to the north include the Oyster Bay Regional Shoreline, Oakland International Airport, the City's Water Pollution Control Plant, and the Metropolitan Golf Links Golf Course. The Oyster Bay Regional Shoreline to the north is completely surrounded by the San Francisco Bay and industrial/commercial uses. The area surrounding the Oakland International Airport has an industrial character and contains a variety of airport-serving uses. The proximity of the airport to the Project site results in aircraft flying relatively low over the site affecting the visual character with their frequent presence.

The landscaping on the landside portion of the site west of Monarch Bay Drive is relatively sparse and the expanses of asphalt, rip rap and concrete dominate the site. Trees are dispersed throughout the site including a variety of deciduous and evergreen trees and several palm trees, particularly near the eastern end of the Marina, near Horatio's restaurant and the Marina Inn. Additionally, landscaped areas with a variety of shrubs and small plants can be seen throughout the site surrounding paths and dividing portions of the parking lots. The Marina Golf Course contains several mature and well-established evergreen trees. These trees line much of the course and create a visual barrier between the golf course side of the site and the Marina side of the site.

The site's position on the eastern edge of the San Francisco Bay and relatively flat topography allows for expansive views in all directions from the western portion of the site. This open character represents a departure from the visual character of the residential neighborhoods that exist east of the Project site. While a portion of the Mulford Gardens neighborhood is directly adjacent to the site, to the north, Monarch Bay Drive provides a visual separation because the shoreline is set back to the east, north of the site.

Views from the Project Site

As discussed above, the flat topography of the site combined with its location on the eastern shore of the San Francisco Bay allows for expansive views in nearly every direction. As show in Figure 4.1-3, on a clear day, distant views of the hills surrounding the Bay can be seen in all directions. To the northeast, views of the Oakland Piedmont hills area are possible. To the northwest, beyond the Oakland International Airport, one can see views of the Bay Bridge, the City of San Francisco, and far field views of the North Bay hills, including Mount Tamalpais. To the west, the hills across the Bay as well as development on the Peninsula are visible. To the southwest, the San Mateo Bridge and the open space provided by the San Francisco Bay allow for long-range, expansive views. To the east, partial views of the hills east of San Leandro are visible but these views are predominantly blocked by trees on the golf course and structures on the Project site.



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Source: PlaceWorks, 2014.

Figure 4.1-3
Views from the Project Site

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Views of the Project Site

From the residential development east of the Project site, views are largely obstructed by trees and shrubs along the eastern edge of the Marina Golf Course. However, partial views are available. From the north looking towards the site, due to the Marina jutting out into the Bay, clear views of the site are available from the portion of the Mulford Gardens neighborhood near the shore of the Bay, as well as from the Oyster Bay Regional Shoreline. From the west, passing boats would have a clear view of the site and the lack of any large distinguishing on-site features. From the south, the site can clearly be seen from Marina Park as well as the northwestern portion of the Tony Lema Golf Course.

There are no State-designated scenic highways within the City of San Leandro. The closest State-designated scenic highway is an 11-mile stretch of Interstate 580 starting at the northern border of San Leandro and extending to the interchange with State Route 24 (SR 24) in Oakland. The portion of Interstate 580 that goes through San Leandro is eligible to become a State-designated scenic highway.⁵ However, that portion of Interstate 580 is about 1.4 miles east of the Project site.

Light and Glare

Light pollution refers to all forms of unwanted light in the night sky around and above developed urban areas, including glare, light trespass, sky glow, and over-lighting. Views of the night sky are an important part of the natural environment. Excessive light and glare can also be visually disruptive to humans and nocturnal animal species, and often reflects an unnecessarily high level of energy consumption. Light pollution has the potential to become an issue of increasing concern as new development contributes additional outdoor lighting installed for safety and other reasons.

As a result of existing development and the site's position on the Bay, the site generates and is subject to existing light and glare. Not only is there a large amount of reflection off of the Bay waters surrounding Marina, but also from the windows and other reflective surfaces of the docked boats and existing buildings on site. During daytime hours, the overall level of light is more prominent on the western portion of the site because of the large amount of tree cover on the Marina Golf Course and the lack of reflective surfaces there which limit the amount of light and glare experienced. Additionally, the trees which line the western edge of the Marina Golf Course create a partial barrier from the light from the Bay to enter the course. Overall, depending on the amount of cloud cover, the amount of reflective surfaces and thereby the overall level of light and reflection on the site has a baseline level that is relatively high but not uniform throughout the site.

4.1.2 STANDARDS OF SIGNIFICANCE

The Project would result in a significant visual quality impact if it would:

1. Have a substantial adverse effect on a scenic vista.

⁵ California Department of Transportation, California Scenic Highway Mapping System, Alameda County, http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm, accessed on July 15, 2014.

2. Substantially degrade the view from a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings.
3. Substantially degrade the existing visual character or quality of the site and its surroundings.
4. Expose people on- or off-site to substantial light or glare, which would adversely affect day or nighttime views in the area.

4.1.3 IMPACT DISCUSSION

This section discusses the impacts of the Project on aesthetic resources.

AES-1 The Project would not have a substantial adverse effect on a scenic vista.

The Project would have a significant environmental impact if it would result in a substantial adverse effect on a scenic vista. Views from the Project site are limited due to the Project site’s relatively flat topography and, as a result, far-field views are generally obscured by existing vegetation and structures. However, as described above, the San Leandro General Plan identifies a Significant View from the Project site looking to the west, towards the San Francisco Bay. Construction of the Project would result in changes to this view.

The significant view as identified by the San Leandro General Plan is shown above in Figure 4.1-1. As shown, the near-field view is dominated by views of boats in the harbor. Mid-to-far-field views include views to the horizon including Mulford Point, San Francisco Bay, and the ridgeline of the Santa Cruz Mountains on the San Francisco Peninsula on clear days.

Photo simulations of the Project are shown below in Figures 4.1-5a through 4.1-12b. The near-field views would be substantially altered by the removal of the existing marina. This change would remove views of boats, docks and other marine-related activities. Existing marina views would be replaced by views of an open expanse of water that would include natural shorelines and public amenities. Although the subject matter of the view would change as a result of the Project, the Project would not result in a substantial adverse effect on near-field views.

The mid- to far-field views would also be altered by the Project due to the inclusion of two restaurants and the 200-room hotel on Mulford Point. The addition of these Project components would partially obstruct views of the horizon and of the ridgeline of the Santa Cruz Mountains on the San Francisco Peninsula. However, as shown below in Figures 4.1-11a and 4.1-12a, the existing views of the horizon are already partially obstructed by boat masts in the harbor and existing vegetation on Mulford Point. Although the inclusion of new structures on Mulford Point would alter the mid-to-far-field view, the Significant View would not be adversely affected because components of the view (Mulford Point, San Francisco Bay, and the Santa Cruz Mountains, etc.) would still be visible, and the views would not be substantially different. The Project also provides multiple opportunities where mid- to far-field views would be available, such as the public promenade, and pedestrian lookouts, which would maximize public views, along with shoreline access.

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Although the Project would change the Significant View identified in the San Leandro General Plan, the major components of the view, both near-field and mid-to-far-field, would remain albeit in a slightly altered form. As a result, the project would result in a *less-than-significant* impact to scenic vistas.

Applicable Regulations:

- None

Significance Before Mitigation: Less than significant.

AES-2	The Project would not substantially degrade the view from a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings.
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The closest scenic highway is a portion of Interstate 580 starting at the northern border of San Leandro and extending north to SR 24 in the city of Oakland. There are no views of the site available from this scenic highway. Therefore, the Project would have no impact on views from a state scenic highway.

Applicable Regulations:

- None

Significance Before Mitigation: No impact.

AES-3	The Project would not substantially degrade the existing visual character or quality of the site and its surroundings.
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The valuable visual features of the site occur on both its landside and waterside areas. On the landside, the golf course provides a landscaped open space that is man-made rather than natural. The golf course is lined with trees that largely block it from view of the neighboring residences and from the waterside Marina portion of the site. On the waterside, the existing boats in the marina and the open waters of the harbor are important visual features. Most of the Marina provides immediate and distant views of the Bay. As discussed above, however, the visual character of the site under existing conditions is also defined by the aging and underutilized Marina, which at this time, is visually uncoordinated. The vacant Boatworks site and remnants of the Blue Dolphin site, the high vacancy rate for the boat slips, as well as broad expanses of parking lot and sparse landscaping contribute to the lack of cohesion and appearance of disuse, increasing the dilapidated character.

The Marina is visually separated from the eastern portion of the site, which contains the Marina 9-hole Golf Course. The large open parking lots of the Marina are currently in contrast with the grass and tree-covered golf course. The Project would significantly alter the visual character of the site. On the landside, new residential development would replace a portion of the golf course. The residential development will be landscaped in accordance with the City's standards and most of the existing trees will remain. Trees that are removed will be replaced in accordance with the City's tree ordinance, as discussed below. The five golf course tees and holes in the development area will be reconfigured where they will still provide an open space quality, albeit man-made. Based on the above discussion, the Project will change the landside area but would not substantially degrade its visual character. On the water side, the 462-boat

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harbor which is currently approximately 30 percent occupied will be replaced by open water in the harbor, with harbor-side shoreline enhancements, pedestrian paths and lookouts, a small boat launch and kayak storage, among other things. Existing parking lots and occasional wooden buildings will be replaced by the hotel, conference center, mixed use and other buildings. The new development will have spaces between the buildings, and a 20-foot- wide public promenade on the bayside of the project will provide continuous and unobstructed views of San Francisco Bay. The Project will also change the waterside portion of the site but will not substantially degrade its character. The Project will provide development with a mix of residential, commercial, and recreational uses intended to reactivate the Marina and that is oriented to preserve and enhance water views and shoreline access, especially as to views of the Bay, in compliance with San Leandro General Plan goals and policies.

In order to more clearly convey the changes to the visual character of the area that would result from the Project, a series of photo simulations were prepared from representative viewpoints across the Project site. Figure 4.1-4 shows the locations of all of the viewpoints described below. The simulations are based on the details provided in the preliminary site plan and are primarily intended to show how the massing of the proposed buildings would affect the visual character of the site. While simulations were prepared for purposes of the analysis, the representation is conceptual and does not necessarily reflect final architectural details. Please note that the block-like representation of the proposed structures are a conservative depiction and the overall design of these buildings would be subject to change as a result of the design review (Site Plan Review) process required by the City.

Given that Marina Boulevard is one of the major entry points to the Project site, Viewpoint A was prepared to show how the gateway to the site would be affected by the proposed development. As seen in Figure 4.1-5a, Viewpoint A – Existing View, there are existing gateway improvements, which serve to signal the entry to the site. The main difference that would result from implementation of the Project, as seen in Figure 4.1-5b, Viewpoint A – Photo Simulation, is the placement of the 3-story residential units on both sides of Monarch Bay Drive, on the northern part of the site, which would partially block existing public views of the Bay from this entry point. These components of the Project are identified as the North Golf Course Residential and North Residential components. While some existing views would be blocked by these new buildings, the addition of these residential units would replace parking areas and contribute to the visual quality of the site toward creating a more ordered urban neighborhood of multiple building forms, rather than the existing sparsely developed and dilapidated waterfront property. Moreover, the landscaping improvements and circulation changes associated with these residential units would be consistent with Policy 9.06 of the San Leandro General Plan, which calls for improvements to the approach routes to the Marina, including streetscape improvements and circulation changes. Additionally, as discussed above in the regulatory setting, the style of the buildings would be required to adhere to the San Leandro Zoning Code development standards and would undergo review by the Planning Commission and City Council, which would ensure adherence to standards which would affect the visual character including those pertaining to height, setbacks, architectural features, and urban design. Thus, the Project would preserve some of the existing Bay views and would provide attractive new development that provides many opportunities to view and enjoy the shoreline, harbor, and Bay amenities.

At this time public views of the Project site from the Mulford Gardens residential neighborhood area (to the east of the Project site) are limited due to the a large number of tall trees on the eastern side of the Marina Golf Course. Viewpoints B and C were prepared to show the impact that would occur in this area from construction of the Project with respect to visual character and public views.



Figure 4.1-4
Visual Simulation Viewpoints

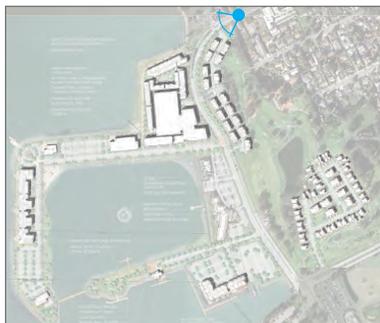


Figure 4.1-5a
Viewpoint A - Existing View

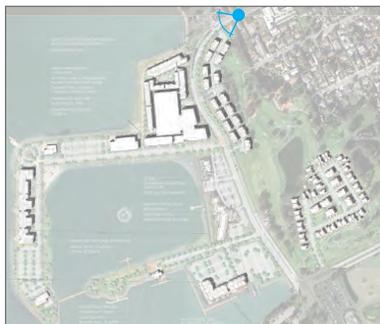


Figure 4.1-5b
Viewpoint A - Photo Simulation

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As seen in Figure 4.1-6a, Viewpoint B – Existing View, the terminus of West Avenue 133rd is largely surrounded by tall trees and bushes, both in the foreground on residential properties, as well as on the border of the Marina 9-hole Golf Course. As a result of the trees on the border of the golf course and Monarch Bay Drive, views of the Marina itself and the San Francisco Bay are very limited under existing conditions. As seen in Figure 4.1-6b, Viewpoint B – Photo Simulation, the main change to the character of this viewpoint would be the addition of the North Golf Course residential units. The screening provided by the trees in the foreground, which are proposed to remain, helps to break up the mass of the new buildings. Moreover, the fact that the trees along the border of the golf course and Monarch Bay Drive block long range views under existing conditions helps to minimize the impact of these changes since the range of views would be similar under existing and Project conditions. The visibility of small portions of the proposed buildings behind the North Golf Course Residential component would have a minimal impact to public views since only small portions would be visible and there is a considerable distance from the existing views from West Avenue 133rd and the proposed buildings west of Monarch Bay Drive. A break in the row of housing adjacent to the terminus of West Avenue 133rd would allow for the retention of some of the longer range views onto the Marina, though there would still be trees blocking much of this view. Through that break in the North Golf Course Residential component, people standing at the end of West Avenue 133rd would be able to see small portions of the 150,000 square foot commercial campus which as seen in Figure 4.1-6b would be placed just north of the existing Horatio's Restaurant. Compliance with the applicable development standards for height, setbacks, landscaping and architecture, and the relatively small visible portion of the buildings would ensure that all of these buildings would be compatible with their surroundings and in conformance with all of the policies in the San Leandro General Plan pertaining to urban design.

As seen in Figure 4.1-7a, Viewpoint C – Existing View, similar to Viewpoint B, the terminus of West Avenue 134th is largely surrounded by trees and other vegetation. As seen in Figure 4.1-7b, Viewpoint C – Photo Simulation, intervening landscaping and the distance of the proposed development from this public view point, due to the buffering provided by the Marina 9-hole Golf Course, would serve to minimize the impact of the new buildings on this vantage point. The North Golf Course Residential buildings would block nearly all of the other proposed buildings west of the North Golf Course Residential. However, while small portions of the tops of buildings behind the North Golf Course Residential buildings may be visible, this would not result in a substantial change to existing views due to the screening that the existing trees provide. The required development standards review described above would ensure that all of these buildings would be compatible with their surroundings and in conformance with all of the policies in the San Leandro General Plan pertaining to urban design.

Viewpoint D shows the effect of the Project on the entry point to the south of the Project site and represents the view that pedestrians entering from Fairway Drive or people parking in the Monarch Bay Golf Club parking lot might see when looking toward the Project site. As seen in Figure 4.1-8a, Viewpoint D – Existing View, from the intersection of Fairway Drive and Monarch Bay Drive, there are existing long-range views of the San Francisco Bay as well as views of a portion of Faro Point which is occupied by Marina Park. Existing views of the Project site from this vantage point are characterized generally by open parking lots, sparse landscaping, and trees along Monarch Bay Drive. As seen in Figure 4.1-8b, Viewpoint D – Photo Simulation, the primary change to the character of this view point would result from the addition of the South Mixed-Use structure.



Figure 4.1-6a
Viewpoint B - Existing View

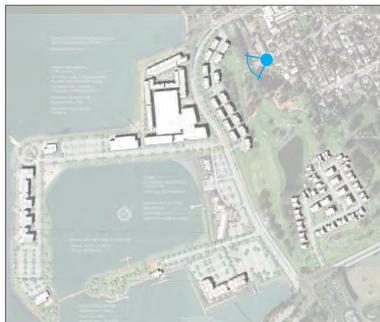


Figure 4.1-6b
Viewpoint B - Photo Simulation

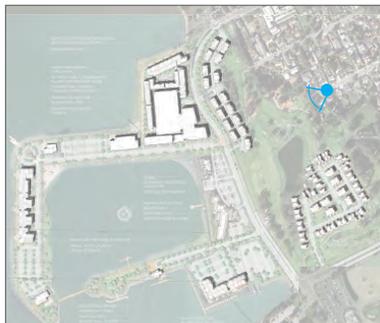


Figure 4.1-7b
Viewpoint C - Photo Simulation

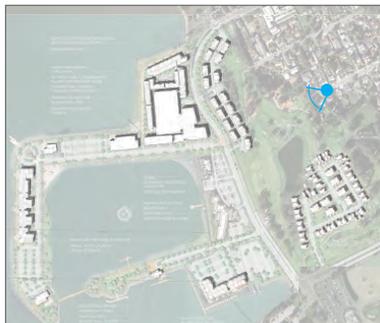
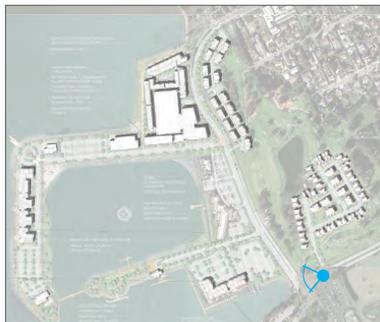


Figure 4.1-7a
Viewpoint C - Existing View



— — Ridgeline

Figure 4.1-8a
Viewpoint D - Existing View



— — Ridgeline

Figure 4.1-8b
Viewpoint D - Photo Simulation

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The addition of this structure would block some views of the Marina from this vantage point. Existing trees on the site and architectural features to break up the building mass would visually break up the South Mixed-Use structure from this viewpoint, which would preserve some views of Marina Park. Furthermore, existing long-range views of the San Francisco Bay and Marina Park, which add to the character of the site, would be retained.

Viewpoint E represents the view from Mulford Point, looking east toward the Project site. As seen in Figure 4.1-9a, Viewpoint E – Existing View, under existing conditions this vantage is characterized by open water with docked boats. The hills east of San Leandro and Oakland are visible in the background and the existing park on the south side of the Marina is visible on the right side of this viewpoint. With the eventual elimination of the boat slips and thereby the boats in the harbor, as seen in Figure 4.1-9b, Viewpoint E – Photo Simulation, this would increase the amount of open water in the harbor, enhancing the water views and shoreline setting of the site. Although improvements are proposed at both Pescador and Mulford Point, such as a community park and bocce ball courts, the hills in the background would remain visible from these park areas at this viewpoint. The elimination of the boats in the harbor would be a departure from the existing character of the site. As discussed before, the Marina area is envisioned in the San Leandro General Plan as the “crown jewel” of the City’s parks system and elimination of the boat slips would allow for additional public recreation opportunities in the form of small boat activities, including kayaking, paddle boarding, and canoeing. The shoreline and marine-based qualities of the site would be preserved as the sight of boats docked in the harbor would be replaced by the sight of the water itself and individuals recreating in the harbor. Removal of the harbor, resulting from siltation over time, would be in conformance with the San Leandro General Plan and would be a positive effect of the project. Additionally, the dilapidated Marina infrastructure visible on the left side of Figure 4.1-9a would be eliminated, including the removal of rip rap and restoration of the natural shoreline, with implementation of the Project. This would contribute to the orderly developed form of the area, adding to the vibrancy of the site.

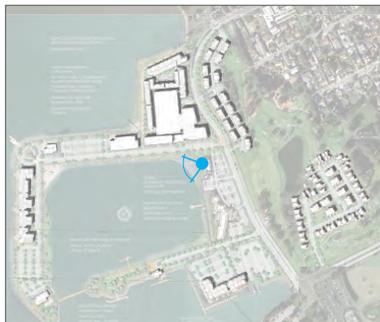
Viewpoint F represents the view experienced from the existing Horatio’s restaurant, looking to the west, onto the Marina. Due to the configuration of the existing boat slips, this view is dominated by docked boats and boat slips. As seen in Figure 4.1-10a, Viewpoint F – Existing View, very little of the westernmost finger of the Marina is visible at this time due to the boats which screen this portion of the Marina from view. The existing San Leandro Yacht Club building is visible on the right side of this picture. As described above, eventual elimination of the boat slips and boats docked in the harbor. Figure 4.1-10b, Viewpoint F – Photo Simulation, shows that with the elimination of the boats and slips, a much more expansive view onto the Marina and San Francisco Bay are allowed for. The hills on the peninsula become more visible and the westernmost portion of the Marina comes into view. The elimination of the boats in the harbor would represent a departure from the existing character of the site, however, this change would result in increased opportunities for public recreation, more expansive views, increased open space, and increased access to the shoreline and harbor basin. Moreover, since the Marina is envisioned as a center for recreation in San Leandro, this change is consistent with the San Leandro General Plan. As demonstrated in the photo simulations, the Project would result in a substantial change in character; however, this change is not adverse.



Figure 4.1-9b
Viewpoint E - Photo Simulation

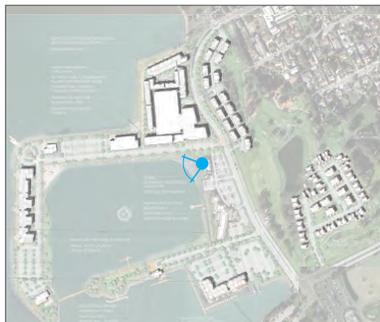


Figure 4.1-9a
Viewpoint E - Existing View



— — Ridgeline

Figure 4.1-10a
Viewpoint F - Existing View



— — Ridgeline

Figure 4.1-10b
Viewpoint F - Photo Simulation

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Viewpoints G1 and G2 show two viewing angles from the location of the existing Marina Inn. Viewpoint G1 looks to the northwest from the hotel and G2 looks to the southwest from the hotel. Figure 4.1-11a, Viewpoint G1 – Existing View, was taken from the third floor of the Marina Inn and shows the view experienced by people staying in the hotel. As shown, the foreground of the view is dominated by the existing boats, slips and large, heavy metal clad protective structures for boats in the harbor. In the background the hills across the San Francisco Bay to the west are visible, as well as the air traffic control tower for the Oakland International Airport and vegetation in the adjacent Oyster Bay Regional Shoreline. Figure 4.1-11b, Viewpoint G1 – Photo Simulation, shows that with implementation of the Project, the office buildings and conference center which would be built on the north side of the Marina would block much of the existing mid-field views of the Oakland International Airport and Oyster Bay Regional Shoreline vegetation. Additionally, the hotel proposed to be constructed on the western finger of the Marina would block a portion of the far-field view across the San Francisco Bay but would maintain some of the existing views. However, only a portion of this existing view would be blocked and the removal of the boats in the harbor would allow for more expansive near-field views. The Project would change the views from this vantage point but would maintain and improve views of open water across the harbor and would retain the shoreline and marine character of the views. The change to these views would be a change, but the impact would be less than significant.

Looking to the southwest from the Marina Inn, as seen in Figure 4.1-12a, Viewpoint G2 – Existing View, there are open parking lots, boat docks and ancillary facilities in the foreground. In the background, the end of Faro Point is visible and further in the background the hills across the San Francisco Bay are visible. Figure 4.1-12b, Viewpoint G2 – Photo Simulation, shows that there would not be a significant change in the character of the site from this viewpoint. The elimination of the boats and slips as well as the addition of the proposed aquatic center are the primary differences, however; the new aquatic center would be screened by trees and the elimination of the boats in the harbor would be consistent with the intent of the San Leandro General Plan for the reasons discussed above. The change to visual character reflected in these views would be less than significant.

Although the Project would alter the character of the Project site, as described, the changes would in many cases result in beneficial impacts through the incorporation of project components intended to provide attractive limited development that enhances the visual character as well as the recreational amenities of Project site. As a result, the Project would result in *less-than-significant* impacts and would not substantially degrade the visual character of the Project site.

Urban Decay Analysis

One way that the Project could affect the visual character within the vicinity of the Project site would be if it were to result in urban decay. Urban decay or urban blight can result if a new development project saturates a market, putting competitors out of business, thereby creating long-term vacancies in competitive centers that would, in turn, lead to urban decay. Concerns have been raised regarding the viability of existing hotels in light of the proposed 200-room hotel included in the Project. Therefore, an urban decay analysis was completed for this Project and is included in Appendix B.



— — Ridgeline

Figure 4.1-11a
Viewpoint G1 - Existing View



— — Ridgeline

Figure 4.1-11b
Viewpoint G1 - Photo Simulation



— — Ridgeline

Figure 4.1-12a
Viewpoint G2 - Existing View



— — Ridgeline

Figure 4.1-12b
Viewpoint G2 - Photo Simulation

AESTHETICS

According to the urban decay analysis, based on current demand, after the hotel component of the Project is constructed there would be a 74 percent overall occupancy rate within the Oakland-Hayward trade area and a 73 percent occupancy rate in the midscale and upper-midscale class market segment in this trade area. The analysis determined that the Project would not increase the aggregate supply levels for hotels such that the occupancy rate would fall below 60 percent, which is considered to be the threshold at which hotels generally become unprofitable and represent an unhealthy market. Moreover, this analysis found that it is unlikely that the Project would lower occupancy rates below 70 percent which is considered to be a healthy level. This means that the hotel market would not be overbuilt and it is unlikely that the Project would result in urban decay which could alter the visual character of the Project site or its surroundings. As a result, a *less-than-significant* impact would occur with respect to urban decay.

Shade and Shadows

In order to assess the potential changes to the character of the site resulting from shade and shadows that would result from structures proposed by the Project, a shading study was conducted. The diagrams included in Appendix C, Shade/Shadow Diagrams, show the shade/shadow on four days of the year; the spring equinox, summer solstice, fall equinox, and the winter solstice. Additionally, in order to provide a summary of the shade/shadow created by the Project, four times throughout each day are depicted: 9:00 a.m., 12:00 p.m., 3:00 p.m., and 6:00 p.m. The diagrams in Appendix C only include shade/shadow created by the Project buildings, as represented by worst-case building massing.⁶

A significant impact to aesthetics could result with respect to shade and shadows if new development cast significantly large shadows on existing buildings, gathering areas, and/or its general surroundings, such that the character of the site was significantly, adversely altered. The diagrams showing the shade/shadow on the summer and winter solstice represent the extreme locations of the sun relative to the planet throughout the year and therefore show the most extreme shade/shadow created by the Project. The diagrams showing the shade/shadow on the spring and fall equinoxes represent average shade/shadow created by the Project. In order to determine whether or not the Project would substantially degrade the existing visual character or quality of the site and its surroundings as a result of shade and shadow impacts, the diagrams showing the shade/shadow on the summer and winter solstice are most useful for a conservative analysis. As these diagrams show, the shadows cast by the proposed buildings would not substantially shade existing buildings or gathering places, on- or off-site, under even the most extreme conditions. Moreover, these most extreme conditions, while cyclical, would be temporary. For these reasons, the shade/shadow impacts of the Project would not be significant.

Overall, as discussed above, the Project would result in substantial changes on the site which would affect the site's visual appearance and character. However, since the proposed changes would be consistent with the San Leandro General Plan and would result in preservation of most views, increase in water views of the harbor through improvements to the promenade and addition of public lookouts, removal of dilapidated structures, provision of attractive low-profile structures and landscaping, and a more vibrant shoreline, the changes would not result in a degradation of the existing site character. Additionally, Project

⁶ Note: The shade/shadow analysis only depicts shade/shadow from buildings proposed by the Project, and does not include potential shade/shadow from landscaping features and/or existing structures.

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improvements would result in improvements to public spaces, such as the community park at the end of Mulford Point Drive. Furthermore, as shown in the Urban Decay Analysis prepared for the Project, since it is not anticipated that the Project would result in urban decay off-site, the Project would not have the potential to result in a degradation of the visual character of areas off-site. Therefore, a *less-than-significant* impact would result in this respect.

Applicable Regulations:

- San Leandro General Plan
- San Leandro Zoning Code

Significance Before Mitigation: Less than significant.

AES-4 The Project would not expose people on- or off-site to substantial light or glare, which would adversely affect day or nighttime views in the area.

Although the Project site has been historically developed and currently includes sources of light and glare, development of the Project would result in new structures and increased intensity of non-residential development and increased density of residential development. As a result, the Project would create additional sources of light and glare. Sources of nighttime light include street and parking lighting, lighting illuminated from new buildings, and outdoor security lights resulting in an increase in the total amount of light emanating from the Project site. In addition, the new residential uses within the site and adjacent residential properties would be sensitive receptors and would be affected by an increase in light and glare. However, all proposed development would be required to conform to San Leandro Zoning Code regulations pertaining to the abatement of unreasonable light and glare including those contained in Section 4-1732, Lighting; Section 4-1670, Performance Standards; Section 5-2512, Site Plan Review Standards; Section 4-1676, Airport Safety Zones; and Section 4-1806, Regulations for On-Premises Signs. Additionally, CALGreen Section 5.106.8 regulates light pollution by establishing maximum Backlight, Uplight and Glare (BUG) ratings for light fixtures. These regulations would assure that day and nighttime conditions would not be adversely affected by light with provisions including the requirement that outdoor parking area lighting create no cone of direct illumination greater than sixty degrees from a light source higher than six feet and that, that cone of direct illumination not shine directly onto an adjacent street, as described in Section 4-1732, Lighting. Implementation of these regulations would be assured by the necessary review by City Staff and Provision D., in Section 5-2512, Site Plan Review Standards which requires that site plans submitted to the City detail features, such as signs, fences, and lighting for buildings, parking lots, and/or driveways and minimize off-site glare. Glare would be minimized through compliance with Section 4-1670(D), which requires that mirror or highly reflective glass shall not cover more than 20 percent of a building surface visible from a street unless an applicant demonstrates to the satisfaction of the Zoning Enforcement Official that use of such glass would not significantly increase glare visible from adjacent streets or pose a hazard for moving vehicles. For these reasons, a *less-than-significant* impact would result with respect to substantial light or glare which would adversely affect day or nighttime views in the area.

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Applicable Regulations:

- San Leandro General Plan
- San Leandro Zoning Code
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.

4.1.4 CUMULATIVE IMPACT DISCUSSION

AES-5 The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to aesthetics.

A cumulative impact would be considered significant if, taken together with past, present and reasonably foreseeable projects in the area, it would result in a substantial contribution to an adverse effect with respect to any of the standards of significance discussed above. The nature of the visual influence of physical development is such that multiple projects would contribute to a cumulative aesthetic impact only when located proximate to one another. In order to significantly impact visual quality, projects must be contained in the same view shed and visually associated within similar perspectives. For this reason, the following analysis accounts for the general vicinity of the Project site. Given that there are no vacant, developable lots in the direct vicinity nor are there any reasonably foreseeable projects proposed to be built in the direct vicinity of the Project site, the cumulative impacts with respect to aesthetics would be *less than significant*.

The Project site is bounded to the west by the San Francisco Bay, to the north by residential development, to the south by open space and recreation uses, and to the east by recreation and residential uses. This results in the Project site being relatively visually isolated. There are no vacant, developable lots in the direct vicinity nor are there any reasonably foreseeable projects proposed to be built in the direct vicinity of the Project site; therefore, the Project would not contribute to significant cumulative impact related to aesthetics. As a result, a *less-than-significant* cumulative impact would occur.

Applicable Regulations:

- None

Significance Before Mitigation: Less than significant.

4.2 AIR QUALITY

This chapter describes the existing air quality setting and evaluates the potential environmental impacts that could occur by adopting and implementing the San Leandro Shoreline Development (Project). “Emissions” refers to the actual quantity of pollutant, measured in pounds per day or tons per year. “Concentrations” refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

This chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review, based on preliminary information available. The analysis contained herein focuses on air pollution from regional emissions and localized pollutant concentrations from buildout of the Project. Transportation sector emissions are based on trip generation provided by Kittelson & Associates, Inc. Criteria air pollutant emissions modeling is included in Appendix D, *Air Quality and Greenhouse Gas Modeling*, of this Draft EIR. A health risk assessment (HRA) for construction and operational phases of the Project is included in Appendix E, *Health Risk Assessment*, of this Draft EIR.

4.2.1 ENVIRONMENTAL SETTING

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. The State is divided into 15 air basins. San Leandro is in the San Francisco Bay Area Air Basin (SFBAAB or Air Basin). The discussion below identifies the natural factors in the Air Basin that affect air pollution. Air pollutants of concern are criteria air pollutants and toxic air contaminants (TACs). Federal, State, and local air districts have adopted laws and regulations intended to control and improve air quality. The regulatory framework that is potentially applicable to the Project is also summarized below.

4.2.1.1 SAN FRANCISCO AIR BASIN

The BAAQMD is the regional air quality agency for the Air Basin, 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.¹

Meteorology

The Air Basin is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range² splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allows air to flow in and out of the Bay Area and the Central Valley.

¹ 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*.

² The Coast Ranges traverses California’s west coast from Humboldt County to Santa Barbara County.

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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 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 Jose where it meets the East Bay hills.

Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap. For example, the average wind speed at the San Francisco International Airport in July is about 17 knots (from 3:00 p.m. to 4:00 p.m.), compared with only 7 knots at San Jose and less than 6 knots at the Farallon Islands.

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. An inversion is a change in the normal conditions that causes the temperature gradient to be reversed or inverted. If the inversion is low and strong, hence stable, the flow of the sea breeze will be inhibited, and stagnant conditions are likely to result.

In the winter, the Air Basin 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 occur 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 Air Basin.

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 cooler than temperatures 15 to 20 miles inland; at night, this contrast usually decreases to less than 10 degrees Fahrenheit.

In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.

Precipitation

The 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 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 accumulating under stagnant conditions). However, during the winter, frequent dry periods do occur where mixing and ventilation are low and pollutant levels build up.

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 unhealthful levels.

Inversions

As described above, an inversion is a layer of warmer air over a layer of cooler air. Inversions significantly affect air quality conditions 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 Air Basin. Elevation inversions³ are more common in the summer and fall, and

³ 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.

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radiation inversions⁴ are more common during the winter. The highest air pollutant concentrations in the Air Basin generally occur during inversions.

4.2.1.2 AIR POLLUTANTS OF CONCERN

A substance in the air that can cause harm to humans and the environment is known as an air pollutant. Pollutants can be in the form of solid particles, liquid droplets, or gases. In addition, they may be natural or man-made. Pollutants can be classified as primary or secondary. Usually, primary pollutants are directly emitted from a process, such as ash from a volcanic eruption, carbon monoxide gas from a motor vehicle exhaust, or sulfur dioxide released from factories. Secondary pollutants are not emitted directly. Rather, they form in the air when primary pollutants react or interact.

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law. Air pollutants 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 (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. Of these, CO, SO₂, NO₂, PM₁₀, 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 (O₃) and nitrogen dioxide (NO₂) are the principal secondary pollutants. Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas.

A description for each of the primary and secondary criteria air pollutants and their known health effects is presented below.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic 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 or no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the Air Basin. Emissions are highest during cold starts, hard acceleration, stop-and-go driving, and when a vehicle is moving at low speeds. New findings indicate that CO emissions per mile are lowest at about 45 miles per hour (mph) for the average light-duty motor vehicle and begin to increase again at higher speeds. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces 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.⁵ The

⁴ During the night, the ground cools off, radiating the heat to the sky.

⁵ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011), Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

Air Basin is designated under the California and National AAQS as being in attainment of CO criteria levels.⁶

- **Reactive Organic Gases (ROGs)** 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 O₃. There are no AAQS established for ROGs. However, because they contribute to the formation of O₃, 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 O₃, PM₁₀, and PM_{2.5}. The two major components of NO_x are nitric oxide (NO) and nitrogen dioxide (NO₂). The principal component of NO_x produced by combustion is NO, but NO reacts with oxygen to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO₂ is only potentially irritating. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 ppm. NO₂ absorbs blue light; the result is a brownish-red 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.⁷ The Air Basin is designated an attainment area for NO₂ under the National and California AAQS.⁸
- **Sulfur Dioxide (SO₂)** 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 SO₂. When SO₂ forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO₂ may do greater harm by injuring lung tissue.⁹ The Air Basin is designated an attainment area for SO₂ under the California and National AAQS.¹⁰
- **Suspended Particulate Matter (PM₁₀ and PM_{2.5})** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, 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).

⁶ California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/desig/adm/adm.htm>, June.

⁷ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

⁸ California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/desig/adm/adm.htm>, June.

⁹ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

¹⁰ California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/desig/adm/adm.htm>, June.

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Some particulate matter, such as pollen, occurs naturally. In the Air Basin most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM₁₀ bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. The U.S. Environmental Protection Agency (EPA) 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 PM₁₀ standards. These health effects include premature death in people with heart or lung disease, non-fatal 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 are currently responsible for about half of particulates in the Air Basin. Wood burning in fireplaces and stoves is another large source of fine particulates.¹¹

Both PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. These health effects include premature death; increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individual with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms.¹² There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs. However, the EPA and California Air Resources Board have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is also classified a carcinogen by the CARB. The Air Basin is designated nonattainment under the California AAQS for PM₁₀ and nonattainment under both the California and National AAQS for PM_{2.5}.^{13,14}

- **Ozone (O₃)** is commonly referred to as “smog” and is a gas that is formed when ROG_s and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O₃ is a secondary criteria air pollutant. O₃ 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. O₃ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. O₃ levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage

¹¹ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

¹² South Coast Air Quality Management District (SCAQMD), 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.

¹³ California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/degis/adm/adm.htm>, June.

¹⁴ On January 9, 2013, the EPA issued a final rule to determine that the SFBAAB has attained the 24-hour PM_{2.5} National AAQS. This action suspends federal State Implementation Plan planning requirements for the Bay Area. The SFBAAB will continue to be designated nonattainment for the National 24-hour PM_{2.5} standard until such time as BAAQMD elects to submit a redesignation request and a maintenance plan to EPA and EPA approves the proposed redesignation.

lung tissue. O₃ can also damage plants and trees and materials such as rubber and fabrics.¹⁵ The Air Basin is designated nonattainment of the 1-hour California AAQS and 8-hour California and National AAQS for O₃.¹⁶

- **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 phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.¹⁷ The Air Basin is designated in attainment of the California and National AAQS for lead.¹⁸ Because emissions of lead are found only in projects that are permitted by BAAQMD, lead is not an air quality of concern for the Project.

Toxic Air Contaminants

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 define 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 Clean Air Act (42 U.S. Code Section 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency (Cal/EPA), 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

¹⁵ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

¹⁶ California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/desig/adm/adm.htm>, June.

¹⁷ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

¹⁸ California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/desig/adm/adm.htm>, June.

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minimize emissions. To date, CARB has established formal control measures for 11 TACs that 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 a health risk assessment (HRA), and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

At the time of the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs.¹⁹ 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 diesel particulate matter (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.

4.2.1.3 REGULATORY FRAMEWORK

Federal and State Regulations

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the U.S. Congress and has been amended several times. The 1970 Clean Air Act 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 species specifics. The California Clean Air Act, 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.

¹⁹ California Air Resources Board (CARB), 1999. Final Staff Report: Update to the Toxic Air Contaminant List.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 4.2-1. These pollutants are ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (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.

Regional Regulations

Bay Area Air Quality Management District

BAAQMD is the agency responsible for assuring that the National and California AAQS are attained and maintained in the Air Basin. BAAQMD is responsible for:

- Adopting and enforcing rules and regulations concerning air pollutant sources.
- Issuing permits for stationary sources of air pollutants.
- Inspecting stationary sources of air pollutants.
- Responding to citizen complaints.
- Monitoring ambient air quality and meteorological conditions.
- Awarding grants to reduce motor vehicle emissions.
- Conducting public education campaigns.
- Air Quality Management Planning.

Air quality conditions in the Air Basin have improved significantly since the BAAQMD was created in 1955.²⁰ The BAAQMD prepares air quality management plans (AQMPs) to attain ambient air quality standards in the Air Basin. The BAAQMD prepares ozone attainment plans for the National O₃ standard and clean air plans for the California O₃ standard. The BAAQMD prepares these AQMPs in coordination with Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC). The most recently adopted comprehensive plan is the 2010 Bay Area Clean Air Plan, which was adopted by BAAQMD on September 15, 2010, and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools.

BAAQMD 2010 Bay Area Clean Air Plan

The purpose of the 2010 Bay Area Clean Air Plan is to: 1) update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement all feasible measures to reduce O₃; 2) consider the impacts of O₃ control measures on PM, TAC, and greenhouse gases (GHGs) in a single, integrated plan; 3) review progress in improving air quality in recent years; and 4) establish emission control measures in the 2009 to 2012 timeframe. The 2010 Bay Area Clean Air Plan also provides the framework for the Air Basin to achieve attainment of the California and National AAQS.

²⁰ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

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TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Ozone (O ₃)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.075 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 Average	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	*	* ^a	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	* ^a	
Respirable 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 Particulate Matter (PM _{2.5})	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 Quarterly	*	1.5 µg/m ³	
	Rolling 3-Month Average	*	0.15 µg/m ³	
Sulfates (SO ₄)	24 hours	25 µg/m ³	*	Industrial processes.
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 ₂ S) 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.

TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Vinyl Chloride	24 hour	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; $\mu\text{g}/\text{m}^3$: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

a. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked.

Source: California Air Resources Board, 2013, Ambient Air Quality Standards, <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>, June.

BAAQMD Community Air Risk Evaluation Program

The BAAQMD’s Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area. Based on findings of the latest report, Diesel Particulate Matter (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 four percent of the cancer risk-weighted emissions, and benzene contributed three percent. Collectively, five compounds—diesel PM, 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). A 75 percent reduction in DPM was predicted between 2005 and 2015 when the inventory accounted for CARB’s diesel regulations. 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.²¹

Modeled cancer risks from TACs in 2005 were highest near sources of DPM: near core urban areas, along major roadways and freeways, and near maritime shipping terminals. Peak modeled risks were found to be located east of San Francisco, near West Oakland, and the Maritime Port of Oakland. BAAQMD has identified seven impacted communities in the Bay Area:

- Western Contra Costa County and the cities of Richmond and San Pablo
- Western Alameda County along the Interstate 880 (I-880) corridor and the cities of Berkeley, Alameda, Oakland, San Leandro, and Hayward
- San Jose
- Eastern side of San Francisco
- Concord

²¹ Bay Area Air Quality Management District (BAAQMD), 2014. Improving Air Quality & Health in Bay Area Communities, Community Air Risk Program (CARE) Retrospective & Path Forward (2004 – 2013). April

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- Vallejo
- Pittsburgh and Antioch

As illustrated in Figure 4.2-1, the majority of the City of San Leandro, including the Project site, lies within the Western Alameda County impacted community.

The major contributor to acute and chronic non-cancer health effects in the Air Basin is acrolein (C₃H₄O). Major sources of acrolein are on-road mobile sources and aircraft, and areas with high acrolein emissions are near freeways and commercial and military airports.²² 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, the BAAQMD does not conduct health risk screening analysis for acrolein emissions.²³

Alameda County Transportation Commission

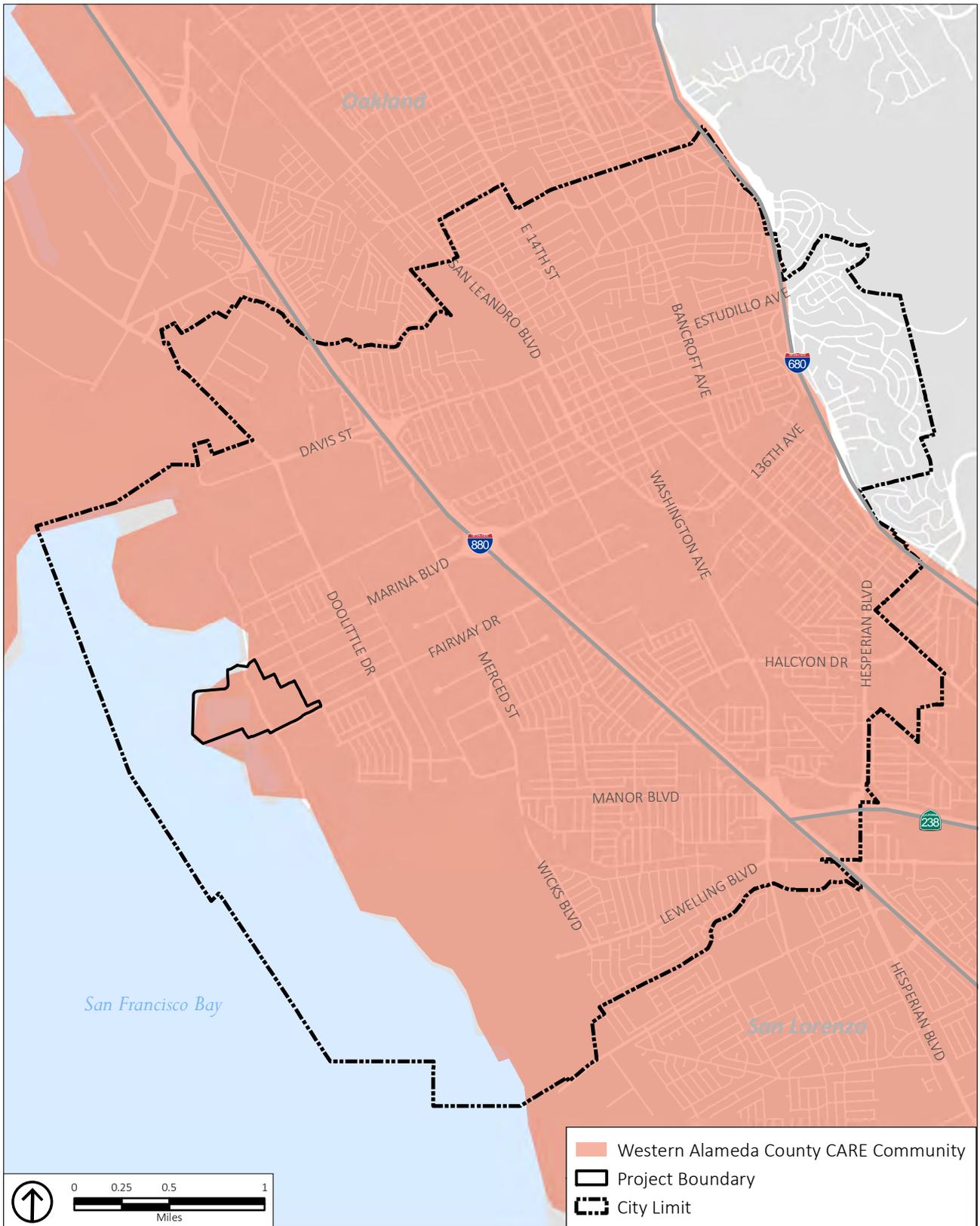
The Alameda County Transportation Commission (Alameda CTC) is the congestion management agency (CMA) for Alameda County. Alameda CTC is tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. Alameda CTC's latest congestion management program (CMP) is the *2013 Congestion Management Program*. Alameda CTC's countywide transportation model must be consistent with the regional transportation model developed by the Metropolitan Transportation Commission (MTC) with the Association of Bay Area Governments (ABAG) data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the CMP system. In addition, Alameda CTC's updated CMP includes multi-modal performance measures and trip reduction and transportation demand management (TDM) strategies consistent with the goals of reducing regional Vehicle Miles Travelled (VMT) in accordance with Senate Bill 375 (SB 375). Strategies identified in the 2013 CMP for Alameda County, where local jurisdictions are a responsible agency, include:²⁴

- **Designated CMP Roadway Network:** Identify and update a CMP roadway network to monitor performance in relation to established level of service (LOS) standards.
- **Level of Service Standards:** Establish LOS standards as a quantitative tool to analyze the effects of land use changes on the transportation network's performance.
- **Multi-modal Performance:** Use established multi-modal performance measures to evaluate whether the transportation network is achieving the broad mobility goals in the CMP.
- **Travel Demand Management:** Implement TDM measures to reduce pressure on existing roadway and parking capacity by using incentives and disincentives to influence travel choice.

²² Bay Area Air Quality Management District (BAAQMD), 2006. Community Air Risk Evaluation Program, Phase I Findings and Policy Recommendations Related to Toxic Air Contaminants in the San Francisco Bay Area.

²³ Bay Area Air Quality Management District (BAAQMD), 2010. Air Toxics NSR Program, Health Risk Screening Analysis Guidelines.

²⁴ Alameda County Transportation Commission (Alameda CTC), 2013. Congestion Management Program http://www.alamedactc.org/files/managed/Document/12460/2013_Alameda_County_Congestion_Management_Program.pdf, October.



Source: Bay Area Air Quality Management District, 2013; Alameda County, 2013; City of San Leandro, 2014; PlaceWorks, 2014.

Figure 4.2-1
BAAQMD Community Air Risk Evaluation (CARE) Program
Impacted Communities Proximate to San Leandro

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- **Land Use Analysis Program:** Assess the impacts of land use decisions made by local jurisdictions on regional transportation systems and ensure that significant impacts are appropriately mitigated.
- **Database and Travel Demand Model:** Approve that computer models used for sub-areas are consistent with the CMP model and standardized modeling assumptions.
- **Capital Improvement Program:** Develop a list of projects intended to maintain or improve the performance of the multimodal transportation system in Alameda County, to move people and goods, and to mitigate regional transportation impacts.
- **Program Conformance and Monitoring:** Ensure local government conformance with LOS standards, Trip Reduction Program, Land Use Analysis Program, and payment of membership dues. Monitor information provided by the local governments to determine whether the CMP objectives are being met.

Plan Bay Area: Strategy for a Sustainable Region

Plan Bay Area is the Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). The Plan Bay Area was adopted jointly by ABAG and MTC July 18, 2013.²⁵ The SCS lays out a development scenario for the region, which when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. According to Plan Bay Area, the Plan meets a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

As part of the implementing framework for Plan Bay Area, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth in the Bay Area by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs in the region.²⁶ The Project site is not within a PDA.²⁷

4.2.1.4 EXISTING AIR QUALITY

Attainment Status of the SFBAAB

Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas. Severity classifications for O₃ range from marginal, moderate, and serious to severe and extreme. The attainment status for the Air Basin is shown in Table 4.2-2. The Air Basin is currently designated a nonattainment area for California and National O₃, California and National PM_{2.5}, and California PM₁₀ AAQS.

²⁵ It should be noted that the Bay Area Citizens filed a lawsuit on MTC's and ABAG's adoption of *Plan Bay Area*.

²⁶ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area: Strategy for a Sustainable Region*, July 18.

²⁷ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area*, <http://geocommons.com/maps/141979>.

TABLE 4.2-2 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment (serious)	Nonattainment
Ozone – 8-hour	Nonattainment	Classification revoked (2005)
PM ₁₀	Nonattainment	Unclassified/Attainment
PM _{2.5}	Nonattainment	Nonattainment ^a
CO	Attainment	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

a. On January 9, 2013, the EPA issued a final rule to determine that the Air Basin has attained the 24-hour PM_{2.5} National AAQS. This action suspends federal State Implementation Plan planning requirements for the Bay Area. The Air Basin will continue to be designated nonattainment for the National 24-hour PM_{2.5} standard until such time as BAAQMD elects to submit a re-designation request and a maintenance plan to EPA and EPA approves the proposed re-designation.

Source: California Air Resources Board, 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/desig/adm/adm.htm>, June 4.

Existing Ambient Air Quality

Existing Air Quality Trends

Existing levels of ambient air quality and historical trends and projections in the vicinity of San Leandro have been documented by measurements made by the BAAQMD. The Oakland Monitoring Station is the closest air quality monitoring station to the City. However, the Oakland Monitoring Station does not monitor PM₁₀; therefore, data from the San Francisco Monitoring Station was used to supplement data for this criteria air pollutant. Data from these monitoring stations are summarized in Table 4.2-3. The federal PM_{2.5} standard has been exceeded several times in the last five years. The State O₃ standard and the State PM₁₀ standards have been exceeded only once in the last five years. The State and federal CO and NO₂ and the Federal O₃ standards have not been exceeded in the last five years in the vicinity of the City.

Existing San Leandro Shoreline Development Emissions

The Project site includes a total of approximately 75 acres, consisting of 52 acres of land and a 23-acre public boat harbor. The boat slips are currently only 30 percent occupied (140 occupied boat slips), primarily due to the build-up of silt in the harbor and channel. The small fraction of boats within the harbor may be being used as housing.²⁸

²⁸ The current estimated population within the Project site is between 16 to 20 live-aboard residents, based upon correspondence between Steve Noack (PlaceWorks) and Delmarie Snodgrass, City of San Leandro, September 5, 2014.

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TABLE 4.2-3 AMBIENT AIR QUALITY MONITORING SUMMARY

Pollutant/Standard	Number of Days Thresholds Were Exceeded and Maximum Levels During Such Violations				
	2009	2010	2011	2012	2013
Ozone (O₃)^a					
State 1-Hour ≥ 0.09 ppm	0	1	0	0	0
State 8-hour ≥ 0.07 ppm	0	0	0	0	0
Federal 8-Hour > 0.075 ppm	0	0	0	0	0
Maximum 1-Hour Conc. (ppm)	0.092	0.097	0.091	0.072	0.076
Maximum 8-Hour Conc. (ppm)	0.063	0.058	0.052	0.045	0.064
Carbon Monoxide (CO)^a					
State 8-Hour > 9.0 ppm	0	0	0	0	*
Federal 8-Hour ≥ 9.0 ppm	0	0	0	0	*
Maximum 8-Hour Conc. (ppm)	1.99	1.63	1.50	1.57	*
Nitrogen Dioxide (NO₂)^a					
State 1-Hour ≥ 0.18 (ppm)	0	0	0	0	0
Maximum 1-Hour Conc. (ppb)	62.0	64.1	56.5	64.8	60.3
Coarse Particulates (PM₁₀)^b					
State 24-Hour > 50 µg/m ³	0	0	0	1	0
Federal 24-Hour > 150 µg/m ³	0	0	0	0	0
Maximum 24-Hour Conc. (µg/ m ³)	36.0	39.7	45.6	50.6	44.3
Fine Particulates (PM_{2.5})^a					
Federal 24-Hour > 35 µg/m ³	1	0	3	0	2
Maximum 24-Hour Conc. (µg/m ³)	36.3	25.2	49.3	33.6	37.9

Notes: ppm: parts per million; ppb: parts per billion; µg/m³: or micrograms per cubic meter; * = insufficient data; NA = Not Available

a. Data from the Oakland 9925 International Boulevard Monitoring Station.

b. Data from the San Francisco Arkansas Street Monitoring Station.

Source: California Air Resources Board, 2014, Air Pollution Data Monitoring Cards (2009, 2010, 2011, 2012,, and 2013), <http://www.arb.ca.gov/adam/index.html>, accessed July 8, 2014.

Other uses within the Project site include two golf courses, a small branch library, the Spinnaker Yacht Club, the San Leandro Yacht Club, the Marina Harbormaster's office, The Marina Inn on San Francisco Bay, Horatio's restaurant, El Torito restaurant, and several public and private (for berthers) bathroom facilities. Criteria air pollutants generated by existing land uses in the San Leandro Shoreline Development area were modeled with CalEEMod 2013.2.2, based on trip generation provided by Kittelson & Associates, emission rates for boats (pleasure-crafts), and based on fuel sales in the harbor provided by the City.²⁹ Criteria air pollutant emissions are shown in Table 4.2-4.

²⁹ Emission rates for boats estimated from *Port of Los Angeles Baseline Air Emissions Inventory* (Starcrest Consulting Group, LLC, 2005).

TABLE 4.2-4 CRITERIA AIR POLLUTANT EMISSIONS GENERATED BY EXISTING LAND USES WITHIN THE SAN LEANDRO SHORELINE DEVELOPMENT

Category	Criteria Air Pollutants (Average lbs/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Area ^a	22	<1	<1	<1
Energy ^a	<1	1	<1	<1
On-Road Mobile Sources ^a	16	52	19	6
Boats (Pleasure-Crafts) ^b	144	49	9	9
Total	182	102	28	14
Tons Per Year (tpy)	33 tpy	19 tpy	5 tpy	3 tpy

Note: Emissions may not total to 100 percent due to rounding.

a. Source: CalEEMod 2013.2.2. Based on year 2014 emission rates. No trip generation is assumed for the 16-20 live-aboard boat residences.

b. Source: Starcrest, 2005. Port of Los Angeles Baseline Air Emissions Inventory.

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.

Existing sensitive receptors proximate to the Project site include the on-site recreational facilities (i.e., the Marina Park and golf courses) and the abutting residential homes to the north and east. Additionally, guests of the existing hotel (The Marina Inn) may also be considered sensitive receptors. However, overall exposures to TACs for the visitors to the on-site recreational facilities and guests of the hotel would be relatively low and are considered short-term exposures. Unlike the exposures to TACs for nearby residences, the short-term exposures to TACs for hotel and recreational use sensitive receptors would not result in significant health risks.

Finally, students and staff of Garfield Elementary School, located approximately 1,100 feet northeast of the Project site, are considered sensitive receptors. The school-based receptors are located further from the Project site than the abutting residential homes to the north and east. Additionally, the exposure period for school-based receptors (e.g., 8 hours per day, 5 days per week, and 180-240 days per year) are much lower than for residential receptors (e.g., 24 hours per day, 7 days per week, and 350 days per year). Ultimately, the overall exposures to TACs for the sensitive receptors at Garfield Elementary School would

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be much lower compared to TAC exposures for the nearby residences. Therefore, only the on-site and off-site residents were considered sensitive receptors for this evaluation.

4.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, the Project would have a significant effect on the environment with respect to air quality if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentrations.
5. Create objectionable odors affecting a substantial number of people.

4.2.2.1 BAAQMD SIGNIFICANCE CRITERIA

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The 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, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts.

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not determine whether the thresholds of significance were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA.

Following the court's order, the BAAQMD released revised CEQA Air Quality Guidelines in May 2012 that include guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. The BAAQMD recognizes that lead agencies may rely on the previously recommended Thresholds of Significance contained in its CEQA Guidelines adopted in 1999. The Alameda County Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or evidence supporting the thresholds. The City finds, therefore, that despite the Superior Court's ruling, and in light of the subsequent case history discussed below, the science and reasoning contained in

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the BAAQMD 2011 CEQA Air Quality Guidelines provide the latest state-of-the-art guidance available. For that reason, substantial evidence supports continued use of the BAAQMD 2011 CEQA Air Quality Guidelines.

On August 13, 2013, the First District Court of Appeal reversed the trial court judgment and upheld the BAAQMD’s CEQA Guidelines. In addition to the City’s independent determination that use of the BAAQMD’s CEQA Guidelines is supported by substantial evidence, they have been found to be valid guidelines for use in the CEQA environmental review process. On November 26, 2013, the California Supreme Court granted review on the issue of whether CEQA requires analysis of how existing environmental conditions affect a project (*California Building Industry Association v Bay Area Air Quality Management District*, Case No. A135335 and A136212).

While the outcome of this case presents uncertainty for current project applicants and local agencies regarding proper evaluation of toxic air contaminants in CEQA documents, local agencies still have a duty to evaluate impacts related to air quality and greenhouse gas emissions. In addition, CEQA grants local agencies broad discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence. Accordingly, the City of San Leandro is using the BAAQMD's 2011 thresholds to evaluate project impacts in order to protectively evaluate the potential effects of the project on air quality and community risk and hazards.

Criteria Air Pollutant Emissions and Precursors

Regional Significance Criteria

The BAAQMD’s criteria for regional significance for projects that exceed the screening thresholds are shown in Table 4.2-5. Criteria for both the construction and operational phases of the Project are shown.

TABLE 4.2-5 BAAQMD REGIONAL (MASS EMISSIONS) CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS

Pollutant	Construction Phase	Operational Phase	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (Tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
PM ₁₀ and PM _{2.5} Fugitive Dust	Best Management Practices	None	None

Source: Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). Appendix D: Threshold of Significance Justification, in California Environmental Quality Act Air Quality Guidelines.

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Local CO Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which is 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). However, with the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the California and National AAQS, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, the BAAQMD does not require a CO hotspot analysis if the following criteria are met:

- The Project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- The Project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The Project traffic would not increase traffic volumes at affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).³⁰

Community Risk and Hazards

The BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and PM_{2.5} because emissions of these pollutants can have significant health impacts at the local level. For assessing community risk and hazards, sources within a 1,000-foot radius are considered. Sources are defined as freeways, high volume roadways (with volume of 10,000 vehicles or more per day or 1,000 trucks per day), and permitted sources.³¹

- The Project would generate TACs and PM_{2.5} during construction activities that could elevate concentrations of air pollutants at the surrounding residential receptors.³² The thresholds for construction-related local community risk and hazard impacts are the same as for Project operations. The BAAQMD has adopted screening tables for air toxics evaluation during construction.³³ Construction-related TAC and PM_{2.5} impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site receptors, as applicable.³⁴

³⁰ Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.

³¹ Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.

³² Students and staff of Garfield Elementary School are located further from the Project site than the abutting residential homes to the north and east. Additionally, the exposure period for school-based receptors (e.g., 8 hours per day, 5 days per week, and 180-240 days per year) are much lower than for residential receptors (e.g., 24 hours per day, 7 days per week, and 350 days per year). Ultimately, the overall exposures to TACs for the sensitive receptors at Garfield Elementary School would be much lower compared to TAC exposures for the nearby residences. Therefore, only the on-site and off-site residents were considered sensitive receptors for this evaluation.

³³ Bay Area Air Quality Management District, 2010, Screening Tables for Air Toxics Evaluations during Construction.

³⁴ Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.

- The Project involves construction of new residential units and new commercial and recreational facilities, and is therefore not a major source of operational TACs and stationary PM_{2.5}. BAAQMD thresholds related to siting new sources of TACs and PM_{2.5} near existing or planned sensitive receptors is not applicable.
- The Project is a sensitive land use that would warrant an on-site community risk and hazards evaluation. Therefore, the community risk and hazards thresholds for operation of the Project are applicable.

The thresholds identified below are applied to the Project’s operational phase (siting new receptors) and construction emissions:

Community Risk and Hazards – Project

Project-level emissions of TACs or PM_{2.5} from individual sources within 1,000 feet of the Project that exceed any of the thresholds listed below are considered a potentially significant community health risk:

- Non-compliance with a qualified Community Risk Reduction Plan;
- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 would be a significant cumulatively considerable contribution;
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m³) annual average PM_{2.5} from a single source would be a significant cumulatively considerable contribution.³⁵

Community Risk and Hazards – Cumulative

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the Project, exceeds the following:

- Non-compliance with a qualified Community Risk Reduction Plan; or
- An excess cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- 0.8 µg/m³ annual average PM_{2.5}.³⁶

Odors

The BAAQMD’s thresholds for odors are qualitative. The BAAQMD does not consider odors generated from use of construction equipment and activities to be objectionable. For operational phase odor impacts, a project that would result in the siting of a new source of odor or exposure of a new receptor to existing or planned odor sources should consider odor impacts. The BAAQMD considers potential odor impacts to be significant if there are five confirmed complaints per year from a facility, averaged over three years. The BAAQMD has established odor screening thresholds for land uses that have the potential

³⁵ Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.

³⁶ Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.

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to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.³⁷

4.2.3 IMPACT DISCUSSION

Methodology

Criteria air pollutants emissions from construction and operation of the Project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. Transportation emissions are based on trip generation provided by Kittelson & Associates. Construction emissions are based on the tentative construction schedule provided by the project developer. A Health Risk Assessment (HRA) for construction activities was conducted for the Project using Lakes Environmental ISCST3. A HRA for operational activities was conducted using BAAQMD's screening analysis tools.

This section discusses the air quality impacts of the Project. This discussion is organized by and responds to each of the potential impacts identified in the thresholds of significance.

AIR-1 Implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan.

Large projects that exceed regional employment, population, and housing planning projections have the potential to be inconsistent with the regional inventory compiled as part of BAAQMD's Bay Area 2010 Clean Air Plan. The Project would generate an increase in 586 people and 927 employees within the Project site and would affect regional vehicle miles traveled (VMT).³⁸ As described in Chapter 4.11, *Population and Housing*, the Project would not exceed the level of population or housing foreseen in City or regional planning efforts; and therefore, would not have the potential to substantially affect housing, employment, and population projections within the region, which is the basis of the Bay Area 2010 Clean Air Plan projections. Additionally, the net increase in regional emissions generated by the Project would not exceed the BAAQMD's emissions thresholds (see AIR-3). These thresholds are established to identify projects that have the potential to generate a substantial amount of criteria air pollutants. Because the Project would not exceed these thresholds, the Project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants. Therefore, the Project would not conflict with or obstruct implementation of the Bay Area 2010 Climate Action Plan and impacts would be considered *less than significant*.

Applicable Regulations:

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

³⁷ Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.

³⁸ Existing residences include an estimated 16-20 people living in houseboats on the Marina (Chapter 4.11, *Population and Housing*). There are an estimated 76 existing employees. For the proposed Project, there are a projected 970 residents and 1,003 employees.

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- Title 24, Part 11, CCR: Green Building Standards Code
- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (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
- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements
- BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
- BAAQMD Regulation 7, Odorous Substances
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing

Significance Before Mitigation: Less than significant.

AIR-2 During construction, the Project could violate an air quality standard or contribute substantially to an existing or projected air quality violation.

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors including, ROG, NOx, PM₁₀ and PM_{2.5}. Development projects below the significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standards 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 (PM₁₀ 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.

The Project would result in overlapping construction sub-phases and substantial demolition export that would occur proximate to existing sensitive land uses to the north and east of the Project site. Therefore, a quantified analysis of the Project’s construction emissions was conducted using CalEEMod based on information available.

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Construction Exhaust Emissions

Construction emissions are based on the preliminary construction schedule developed for the Project. The Project site would be developed in up to three construction phases; however, the balance of the office uses may be developed in Phase 2. Because condensing the Project construction activities into two development phases would generate higher average daily construction emissions, air quality modeling is conservatively based on a two-phased development. The first phase would include redevelopment along the shoreline on the western portion of the site and the library on Fairway Drive. The second phase encompasses the inland residential development within the Marina Golf Course and the balance of the office land uses within the office park. The Spinnaker Yacht Club may remain on-site and be repurposed or replaced as the proposed Aquatic Center. The Project would be developed based on the market demand for the proposed non-residential and residential Project components. Phase 1 could commence as early as 2016 and is estimated to take approximately three and one-half years to complete. Phase 2 would commence following completion of Phase 1 and could commence as early as 2020 and is estimated to take approximately one and a half years to complete. Buildout of the Project is forecast to occur as early as 2021.³⁹

To determine potential construction-related air quality impacts, criteria air pollutants generated by Project-related construction activities are compared to the BAAQMD significance thresholds in Table 4.2-5 for average daily emissions. Average daily emissions are based on the 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 BAAQMD average daily thresholds. Consequently, construction-related criteria pollutant emissions from exhaust are *less than significant*.

Fugitive Dust

As identified above, the Project would warrant substantial asphalt and some minor building demolition. In addition, ground-disturbing activities would generate fugitive dust. Fugitive dust emissions (PM₁₀ and PM_{2.5}) are considered to be significant unless the Project implements the BAAQMD's Best Management Practices (BMPs) for fugitive dust control during construction. PM₁₀ is typically the most significant source of air pollution from the dust generated from construction. The amount of 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. If uncontrolled, PM₁₀ and PM_{2.5} levels downwind of actively disturbed areas could possibly exceed State standards. Consequently, construction-related criteria pollutant emissions are potentially *significant*.

Impact AIR-2: During construction of the Project, construction activities would generate fugitive dust during ground-disturbing activities that exceeds the BAAQMD significance thresholds.

³⁹ To be conservative, air quality modeling was completed using an earlier start date of January 1, 2016, which reflects higher emission rates from off-road equipment and on-road vehicles. Vehicle and equipment turnover, as well as changes in emissions regulations, result in lower emission rates in later years.

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TABLE 4.2-6 SAN LEANDRO SHORELINE DEVELOPMENT CONSTRUCTION-RELATED CRITERIA AIR POLLUTANT EMISSIONS ESTIMATES

Year	Criteria Air Pollutants (tons/year) ^a					
	ROG	NO _x	Fugitive PM ₁₀ ^b	Exhaust PM ₁₀	Fugitive PM _{2.5} ^b	Exhaust PM _{2.5}
Phase 1						
2016	1	8	1	<1	<1	<1
2017	1	7	1	<1	<1	<1
2018	1	6	1	<1	<1	<1
2019	2	3	1	<1	<1	<1
Phase 2						
2019	<1	2	<1	<1	<1	<1
2020	3	3	<1	<1	<1	<1
Total Construction Emissions	8	30	4	1	1	1

	Criteria Air Pollutants (average lbs/day) ^a					
	ROG	NO _x	Fugitive PM ₁₀ ^b	Exhaust PM ₁₀	Fugitive PM _{2.5} ^b	Exhaust PM _{2.5}
Average Daily Construction Emissions all Phases ^c	13	48	6	2	2	2
BAAQMD Average Daily Project-Level Threshold	54	54	BMPs	82	BMPs	54
Exceeds Average Daily Threshold	No	No	NA	No	NA	No

Note: Emissions may not total to 100 percent due to rounding.

BMP: Best Management Practices; NA: not applicable

a. Construction phasing is based on the preliminary information provided by the developer. 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. Modeling is conservative because it assumes an earlier start date which reflects slightly higher emission rates from off-road equipment and on-road vehicles. Vehicle/equipment turnover as well as changes in emissions regulations result in lower emissions rates in later years.

b. Includes implementation of best management practices for fugitive dust control required by BAAQMD as mitigation, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and daily street sweeping.

c. Average daily emissions are based on the construction emissions divided by the total number of active construction days. Phase 1 and Phase 2 construction activities would not overlap. The total number of construction days is estimated to be 1,255.

Source: CalEEMod 2013.2.2.

Mitigation Measure AIR-2: Applicants for new development projects within the Shoreline Development shall require their construction contractor(s) to comply with the following BAAQMD Best Management Practices for reducing construction emissions of PM₁₀ and PM_{2.5}:

- Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- Pave, apply water twice daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.

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- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Sweep daily (with water sweepers using reclaimed water if possible) or as often as needed all paved access roads (e.g., Monarch Bay Drive and Fairway Drive), parking areas and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the Project site, or as often as needed, to keep streets free of visible soil material.
- Hydro-seed or apply non-toxic soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit vehicle traffic speeds on unpaved roads to 15 mph.
- Replant vegetation in disturbed areas as quickly as possible.
- Install sandbags or other erosion control measures to prevent silt runoff from public roadways.

The City of San Leandro Building Official or their designee shall verify compliance that these measures have been implemented during normal construction site inspections.

Significance After Mitigation: Less than significant. Mitigation Measure AIR-2 would require adherence to the current BAAQMD's basic control measures for reducing construction emissions of PM and would ensure impacts from fugitive dust generated during construction activities are less than significant.

AIR-3	During operation, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.
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Long-term air pollutant emissions generated by a mixed-use development are typically associated with the burning of fossil fuels in cars (mobile sources); energy use for cooling, heating, and cooking (energy); and landscape equipment (area sources). The primary source of long-term criteria air pollutant emissions generated by the Project would be emissions produced from Project-generated vehicle trips. The Project would generate a total of 9,046 average daily trips during a weekday and 8,171 average daily trips on the weekend, which is a net increase of 6,525 additional average daily trips during a weekday and 5,764 additional average daily trips on the weekend compared to existing conditions. Table 4.2-7 identifies the net increase in criteria air pollutant emissions associated with the Project.

As shown in Table 4.2-7, the net increase in operational emissions generated by the Project would not exceed the BAAQMD daily or annual thresholds. Consequently, the Project would not cumulatively contribute to the nonattainment designations of the Air Basin, and regional operational phase air quality impacts would be *less than significant*.

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TABLE 4.2-7 SAN LEANDRO SHORELINE DEVELOPMENT CRITERIA AIR POLLUTANTS EMISSIONS FORECAST

Category	Criteria Air Pollutants (average lbs/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Existing				
Area ^a	22	<1	<1	<1
Energy ^a	<1	1	<1	<1
On-Road Mobile Sources ^a	10	30	19	5
Boats (Pleasure-Crafts) ^b	144	49	9	9
Total	176	80	28	14
Project				
Area ^a	48	<1	<1	<1
Energy ^a	<1	4	<1	<1
On-Road Mobile Sources ^a	27	82	52	15
Total	75	86	52	15
Change from 2014 Land Uses	-101	7	25	1
BAAQMD Average Daily Project-Level Threshold	54	54	82	54
Exceeds Average Daily Threshold	No	No	No	No
Category	Criteria Air Pollutants (tons/year)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Existing Tons per Year (tpy)	32	15	5	3
Project Tons per Year (tpy)	14	16	10	3
Change from 2014 Land Uses	-18	1	5	<1
BAAQMD Annual Project-Level Threshold	10 tpy	10 tpy	15 tpy	10 tpy
Exceeds Annual Threshold	No	No	No	No

^a CalEEMod 2013.2. Based on year 2020 emission rates No trip generation is assumed for the 16-20 live-aboard boat residences.

^b Starcrest, 2005. *Port of Los Angeles Baseline Air Emissions Inventory*

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014). Assumes all fireplaces are gas-burning fireplaces in accordance with BAAQMD Regulation 6, Rule 3.

New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014). Average daily emissions are based on the annual operational emissions divided by 365 days.

Source: CalEEMod 2013.2. Based on year 2020 emission rates.

Applicable Regulations:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 CCR: Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code
- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

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- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (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
- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements
- BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
- BAAQMD Regulation 7, Odorous Substances
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing

Significance Before Mitigation: Less than significant.

AIR-4 **Implementation of the Project would result in a cumulatively considerable net increase of criteria pollutants for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).**

This section analyzes potential impacts related to air quality that could occur from a combination of the Project with other past, present, and reasonably foreseeable projects within the Air Basin. Any project that produces a significant project-level regional air quality impact in an area that is in nonattainment adds to the cumulative impact. Due to the extent of the area potentially impacted from cumulative project emissions (the Air Basin), a project is cumulatively significant when project-related emissions exceed the BAAQMD emissions thresholds shown in Table 4.2-5. As described in this report, the Project would have a significant construction impact (see AIR-2), and on-site and off-site community risks and hazards (see AIR-5).

Therefore, the Project's contribution to cumulative air quality impacts would be *significant*.

Impact AIR-4: Construction and operation of the Project would cumulatively contribute to the non-attainment designations of the SFBAAB.

Mitigation Measure AIR-4: Implementation of Mitigation Measures AIR-2 and AIR-5 would reduce cumulative air quality impacts.

Significance After Mitigation: Less than significant. Mitigation Measures AIR-2 would reduce impacts from fugitive dust generated during construction activities. Mitigation Measure AIR-5 would reduce exposures of sensitive receptors to substantial concentrations of TACs and PM2.5. With these mitigation measures, regional and localized construction emissions would not exceed the BAAQMD significance thresholds. Consequently, the Project would not cumulatively contribute to the

nonattainment designations of the Air Basin and impacts would be less than significant with mitigation.

AIR-5 Construction of the Project could expose sensitive receptors to substantial concentrations of air pollution.

On-Site and Off-Site Community Risk and Hazards During Construction

The Project would elevate concentrations of TACs and PM_{2.5} in the vicinity of sensitive land uses during construction activities. Construction activities could occur proximate to sensitive receptors both on-site and off-site. Additional sensitive receptors would be the on-site residents living in the North Residential Apartments or the South Mixed-Use Condos/Apartments during the second phase of construction. Consequently, a full health risk assessment (HRA) of TACs and PM_{2.5} is warranted.

Sources evaluated in the HRA include off-road construction equipment and heavy-duty diesel trucks along the truck route. The US EPA ISCST3 dispersion modeling program was used to estimate excess lifetime cancer risks and acute and chronic non-cancer hazard indexes at the nearest sensitive receptors. Results of the analysis are shown in Table 4.2-8.

TABLE 4.2-8 CONSTRUCTION RISK SUMMARY

Receptor	Project Level Risk			
	Cancer Risk – Adult (per million)	Cancer Risk – Child (per million)	Chronic Hazards	PM _{2.5}
Off-Site Resident	8.3	44	0.22	0.68
On-Site Resident ^a	2.6	14	0.07	0.22
Threshold	10	10	1.0	0.3 µg/m ³
Exceeds Threshold	No	Yes	No	Yes

a. On-site residents (living in the North Residential Apartments or the South Mixed-Use Condos/Apartments) would only be exposed to construction emissions during the second phase of construction. Off-site residents would be exposed to construction emissions for all construction phases.
Source: Lakes AERMOD View, 8.7, 2014.

The results of the HRA are based on the maximum receptor concentration over a 5-year construction exposure period for off-site receptors and 1.5-year construction period for on-site receptors, assuming 24-hour outdoor exposure, and averaged over a 70-year lifetime. The results of the HRA indicate that the incremental cancer risk for off-site residents proximate to the site during the construction period is 8.3 per million for the adult-scenario, which would not exceed the cancer risk threshold; and 44 per million for the child scenario, which would exceed the cancer risk threshold. The results of the HRA indicate that the incremental cancer risk for on-site residents proximate to the site during the second phase of construction is 2.6 per million for the adult-scenario, which would not exceed the threshold; and 14 per million for the child scenario, which would exceed the cancer risk threshold. For non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for both off-site and on-site residents. Therefore, chronic non-carcinogenic hazards are within acceptable limits. In addition, PM_{2.5} annual concentrations would exceed the BAAQMD significance thresholds for off-site residents.

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Consequently, the Project would expose sensitive receptors to substantial concentrations of air pollutant emissions during construction, and impacts would be *significant*.

Impact AIR-5: Construction activities of the Project could expose sensitive receptors to substantial concentrations of TAC and PM_{2.5}.

Mitigation Measure AIR-5: The construction contractor shall use equipment that meets the United States Environmental Protection Agency (EPA)-Certified Tier 3 emissions standards for off-road diesel-powered construction equipment greater than 50 horsepower. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine, as defined by CARB regulations. Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 3 or higher emissions standards and Level 3 diesel emissions control for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the Project Site for verification by the City of San Leandro Building Official or their designee. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site. Equipment shall properly service and maintain construction equipment in accordance with the manufacturer’s recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board’s Rule 2449.

Significance After Mitigation: Less than significant. Mitigation Measures AIR-5 would reduce the Project’s localized construction emissions. The mitigated health risk values were calculated and are summarized in Table 4.2-9. The results indicate that with mitigation, the excess cancer risk for the adult and child exposure scenarios would be less than the threshold values. Additionally, the PM_{2.5} annual concentrations would be below the significance threshold with mitigation. Consequently, the Project would not expose sensitive receptors to substantial concentrations of air pollutant emissions during construction and impacts would be less than significant with mitigation.

TABLE 4.2-9 CONSTRUCTION RISK SUMMARY WITH MITIGATION

Receptor	Project Level Risk			
	Cancer Risk – Adult (per million)	Cancer Risk – Child (per million)	Chronic Hazards	PM _{2.5}
Off-Site Resident	1.4	7.9	0.05	0.24
On-Site Resident ^a	0.3	1.6	0.01	0.08
Threshold	10	10	1.0	0.3 µg/m ³
Exceeds Threshold	No	No	No	No

a. On-site residents (living in the North Residential Apartments or the South Mixed-Use Condos/Apartments) would only be exposed to construction emissions during the second phase of construction. Off-site residents would be exposed to construction emissions for all construction phases.

Source: Lakes AERMOD View, 8.7, 2014.

AIR-6 Operation of the Project would not expose sensitive receptors to substantial concentrations of air pollution.

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 one-hour standard of 20 parts per million (ppm) or the eight-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 ambient air quality standards 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 longer periods and are subject to reduced speeds.

The Project would generate 1,040 new external trips during the weekday morning peak hour, 1,060 new external trips during the weekday evening peak hour, and 860 new external trips during the Saturday midday hour.⁴⁰ The Project would not conflict with Alameda CTC's CMP because it would not hinder the capital improvements outlined in the CMP or alter regional travel patterns. Alameda CTC's CMP must be consistent with MTC's/ABAG's Plan Bay Area, 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 VMT and associated GHG emissions reductions. The Project would be consistent with the overall goals of the MTC/ABAG's Plan Bay Area. Furthermore, the Project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour or to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. Trips associated with the Project would not exceed the screening criteria of the BAAQMD. Localized air quality impacts related to mobile-source emissions would therefore be *less than significant*.

Toxic Air Contaminants – Siting of Sensitive Receptors

On-site health risks and hazards imposed by existing sources (e.g., stationary sources and traffic on adjacent streets and freeways) on the sensitive receptors of the Project (i.e., residents) were evaluated pursuant to BAAQMD's methodology. BAAQMD has developed screening thresholds for assessing potential health risks from stationary and mobile sources. Sources located within 1,000 feet of the Project are included in BAAQMD's screening thresholds. To evaluate nearby sources, BAAQMD's database of existing sources and freeway and surface streets screening tables for Alameda County were used.

Stationary sources near the Project site were identified using BAAQMD's Stationary Source Screening Analysis Tool.⁴¹ Two stationary sources were identified (County of Alameda Public Works emergency gasoline generator and San Leandro Marina gasoline dispensing). However, the gas dispensing operation is located at the San Leandro Marina and will be removed as part of the Project. Therefore, there will be no emissions from this source in the future and it does not require additional evaluation.

⁴⁰ Kittelson & Associates, 2014, Traffic Impact Analysis for the San Leandro Shoreline Development Project.

⁴¹ BAAQMD Stationary Source Screening Analysis Tool can be accessed from BAAQMD's website at <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>

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There were no roadways identified within 1,000 feet of the Project site with over 10,000 average daily traffic trips.⁴² The closest high volume roadway, Marina Boulevard, has a traffic volume larger than 10,000 vehicles per day east of Aurora Drive. West of Aurora Drive, the traffic volumes are less than 10,000 vehicles per day. Additionally, the Transportation Impact Analysis for the Project indicates that the twenty-four hour vehicle counts for the portion of Marina Boulevard west of Aurora Drive would be less than 10,000 vehicles.⁴³ Because the traffic volumes are less than 10,000 vehicles per day west of Aurora Drive and the intersection of Marina Boulevard and Aurora Drive is located more than 1,000 feet from the Project site, emissions of vehicles on Marina Boulevard do not require additional evaluation.

Lastly, the Oakland International Airport (Airport) is located approximately 1 mile northwest of the Project site. Although the Airport is located over 1,000 feet away from the Project site, air emissions from aircraft, ground service equipment (GSE), auxiliary power units, and fuel storage and handling have the potential to impact areas over 1,000 feet away. The results of a Health Risk Assessment conducted for the Oakland Airport in 2003 indicated that the incremental cancer risk to off-site residents and children in the Project site area was less than 10 in one million (i.e., BAAQMD's significance threshold) and therefore, no adverse health impacts are expected.⁴⁴ In addition, a mitigation measure requiring conversion of all diesel GSE at the Airport, which accounted for 60 percent of the cancer risk, to alternative fuels by 2010 results in lower incremental cancer risks than previously predicted. Based on these results, air emissions from the Airport were not evaluated further.

BAAQMD provides screening tables that indicate predicted community risk impacts for roadways.⁴⁵ The results of the on-site community risk summary are provided in Table 4.2-10.

TABLE 4.2-10 ON-SITE COMMUNITY RISK SUMMARY

Emission Source	Project Level Risk		
	Cancer Risk (per million)	Chronic Hazards	PM _{2.5}
County of Alameda Public Works	0	0.0	0.0
Threshold	10	1.0	0.3 µg/m ³
Exceeds Threshold	No	No	No

The results of the cancer risk screening analysis for all stationary and mobile sources within 1,000 feet of the Project are less than the BAAQMD threshold of 10 in a million for a lifetime cancer risk and the non-carcinogenic chronic hazard index of 1.0. In addition, PM_{2.5} concentrations are below the BAAQMD significance threshold of 0.3 µg/m³. Therefore, the results of this screening level risk assessment, with

⁴² California Environmental Health Tracking Program (CEHTP), 2007. Traffic linkage tool can be accessed at http://www.ehib.org/traffic_tool.jsp

⁴³ Kittelson & Associates, 2014, Traffic Impact Analysis for the San Leandro Shoreline Development Project.

⁴⁴ Port of Oakland, 2003. *Draft Ambient Air Quality Human Health Risk Assessment for the Oakland International Airport*. Prepared for the Port of Oakland by CDM.

⁴⁵ BAAQMD Roadway Analysis Tables can be accessed from BAAQMD's website at <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>

respect to on-site risk during the operational phase of the Project, indicate that the impact would be *less than significant*.

Three new restaurants are proposed as part of the Project. One or more of these restaurants could have char broilers, which produce VOCs and PM₁₀ emissions. However, the char broilers would be subject to permitting by BAAQMD under Rule 2, *Commercial Cooking Equipment*, and would be required to install control devices in order to reduce emissions. All commercial cooking operations that are subject to the rule must also register their char broiler and control equipment with the BAAQMD and pay applicable fees. With implementation of these requirements, emissions from the char broilers would be *less than significant* and would not pose a health risk to Project occupants.

Applicable Regulations:

- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (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
- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements
- BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
- BAAQMD Regulation 7, Odorous Substances
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing

Significance Before Mitigation: Less than significant.

AIR-7 Implementation of the Project would not create or expose a substantial number of people to objectionable odors.

The Project would construct new residential, commercial, office, conference center, and restaurant land uses within the Project site. Construction and operation of these types of projects (residential, commercial, office, civic, restaurant) would not generate substantial odors or be subject to odors that would affect a substantial number of people. The type of facilities that are 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, commercial, office, restaurant, recreational, and civic (library) uses are not associated with foul odors that constitute a public nuisance.

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During operation, residential units and the restaurants could generate odors from cooking. Odors from cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people. Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, Odorous Substances, which requires abatement of any nuisance generating an odor complaint. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds.⁴⁶ In addition, 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."

During construction activities, 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*.

Therefore, because existing sources of odors are required to comply with BAAQMD Regulation 7, impacts to siting of new sensitive land uses would be *less than significant*.

Applicable Regulations:

- California Health & Safety Code, Section 114149
- BAAQMD Regulation 1, Rule 1-301, Public Nuisance
- BAAQMD Regulation 7, Odorous Substances

Significance Before Mitigation: Less than significant.

4.2.4 CUMULATIVE IMPACT DISCUSSION

AIR-8 Implementation of the Project would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.

As described under AIR-4, regional air quality impacts were identified as significant; therefore, in combination with past, present, and reasonably foreseeable projects, the Project would result in a significant cumulative impact with respect to air quality. Therefore, the impact would be *significant*.

⁴⁶ It should be noted that while restaurants can generate odors, these sources are not identified by BAAQMD as nuisance odors since they typically do not generate significant odors that affect a substantial number of people. Larger restaurants that employ five or more people are subject to BAAQMD Regulation 7, Odorous Substances.

Impact AIR-8: Construction and operation of the Project would cumulatively contribute to the non-attainment designations of the SFBAAB.

Mitigation Measure AIR-8: Implementation of Mitigation Measures AIR-2 and AIR-5 would reduce cumulative air quality impacts.

Significance After Mitigation: Less than significant. Mitigation Measures AIR-2 would reduce impacts from fugitive dust generated during construction activities. Mitigation Measure AIR-5 would reduce exposures of sensitive receptors to substantial concentrations of TACs and PM2.5. With these mitigation measures, regional and localized construction emissions would not exceed the BAAQMD significance thresholds. Consequently, the Project would not cumulatively contribute to the nonattainment designations of the Air Basin and impacts would be less than significant with mitigation.

AIR QUALITY

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4.3 BIOLOGICAL RESOURCES

This chapter describes existing biological resources within the vicinity of the Project site and evaluates the potential biological resources impacts associated with future development that could occur by implementing the Project. A summary of the relevant regulatory setting and existing conditions is followed by a discussion of the Project-specific and cumulative impacts.

Biological resources associated with the Project site were identified through a review of available background information and field reconnaissance surveys. Available documentation was reviewed to provide information on general resources in the San Leandro area, presence of sensitive natural communities, and the distribution and habitat requirements of special-status species, which have been recorded from or are suspected to occur in the Project vicinity. This included records maintained by the California Natural Diversity Data Base (CNDDDB), the National Wetland Inventory, the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California* (electronic edition); and the *San Leandro Marina Opportunities and Constraints Analysis*.¹ Field reconnaissance surveys were conducted by the EIR biologist on June 18, 2013 and August 2, 2014 to confirm existing vegetation and wildlife resources, presence or absence of any sensitive resources, and determine potential impacts of the Project.

4.3.1 ENVIRONMENTAL SETTING

4.3.1.1 REGULATORY FRAMEWORK

This section summarizes key federal, State, regional, and City regulations and policies pertaining to biological resources that are applicable to the Project.

Federal Regulations

The federal laws that regulate the treatment of biological resources include the Endangered Species Act, NPDES program, the Migratory Bird Treaty Act, and the Clean Water Act. The following sections outline the relevant principles of each.

Federal Endangered Species Act

The United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) are responsible for implementation of the federal Endangered Species Act (ESA). The Act 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. Threatened species, subspecies, or distinct population segments are those that are likely to become endangered in the near future.

¹ ESA, San Leandro Marina Opportunities and Constraints Analysis, 2007.

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Clean Water Act

The federal Clean Water Act (CWA) is administered by the United States Environmental Protection Agency (EPA) and the United States Army Corps of Engineers (Army Corps). The Army Corps is responsible for regulating the discharge of fill material into waters of the United States, including lakes, rivers, streams, and their tributaries, as well as wetlands. In 2008, Army Corps published the *Wetlands Regulatory Assistance Program: Regional Supplements to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, which provides detailed information for the Arid West Region. Wetlands are defined for regulatory purposes as areas “inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

The discharge of dredged or fill material into waters of the United States is subject to permitting under Section 404 (Discharges of Dredge or Fill Material) of the CWA. Section 401 (Certification) specifies additional requirements for permit review, particularly at the State level. Project proponents must obtain a permit from the Army Corps for all discharges of dredged or fill material into waters of the United States, including wetlands, before proceeding with a proposed action. The Army Corps permits must be certified by the State Water Resources Control Board (SWRCB) in order to be valid. Thus, certification from the SWRCB should be requested at the same time an application is filed with the Army Corps.

Certification from the California Regional Water Quality Control Board (RWQCB) is also required when a proposed activity may result in discharge into navigable waters, pursuant to Section 401 of the CWA and EPA 404(b)(1) Guidelines.

National Pollutant Discharge Elimination System Program

The 1972 amendments to the federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources (Section 402). The NPDES Permit Program is the primary federal program that regulates point source and nonpoint-source discharges to waters of the United States. The SWRCB issues both general and individual NPDES permits for certain activities.

Migratory Bird Treaty Act

The USFWS is also responsible for implementing the Migratory Bird Treaty Act (MBTA). The MBTA implements a series of treaties between the United States, Mexico, and Canada that provide for the international protection of migratory birds. The MBTA prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the USFWS; this prohibition includes whole birds, parts of birds, and bird nests and eggs. Nests of bird species regulated under the MBTA are protected when in active use during the breeding season. Examples of permitted actions that do not violate the law are the possession of a hunting license to pursue specific game birds, legitimate research activities, display in zoological gardens, bird-banding, and similar activities.

State Regulations

State laws regulating biological resources include the California Endangered Species Act, the California Fish and Game Code, and the California Native Plant Protection Act, each of which is described below.

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California Endangered Species Act

The California Endangered Species Act (CESA) establishes State policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve projects that jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect species that are on the federal and State lists, compliance with the federal ESA satisfies the CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with CESA under California Fish and Game Code Section 2080.1. For projects that would result in take of species that are only State-listed, the Project proponent must apply for a take permit under Section 2081(b) of the California Fish and Game Code. A Habitat Conservation Plan (HCP) must also accompany an application for an incidental take permit. The purpose of the HCP is to ensure that the effects of the permitted action on listed species are adequately minimized and mitigated.

California Fish and Game Code

Under the California Fish and Game Code, the CDFW provides protection from “take” for a variety of species, including Fully Protected species. “Fully Protected” is a legal protective designation administered by the CDFW, intended to conserve wildlife species that are at risk of extinction, within California. Lists have been created for birds, mammals, fish, amphibians, and reptiles. The California Fish and Game Code sections dealing with Fully Protected species state that these animals “...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected” species. However, taking may be authorized for necessary scientific research. In 2003, the code sections dealing with fully protected species were amended to allow CDFW to authorize take resulting from recovery activities for state-listed species.

The CDFW also protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Section 1601 to 1606 of the California Fish and Game Code. The Fish and Game Code stipulates that it is “unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake” without notifying CDFW, incorporating necessary mitigation, and obtaining a streambed alteration agreement. Through policy, CDFW asserts jurisdiction to the top of the banks of all streams, including intermittent and ephemeral streams, extending laterally to the upland edge of adjacent riparian vegetation. The CDFW uses the Cowardin system for wetland identification and classification, which typically results in a larger jurisdictional area than federal jurisdiction under the CWA. Under this system, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (CNPPA) prohibits importation of rare and endangered plants into California, “take” of rare and endangered plants, and sale of rare and endangered plants. CESA defers to the CNPPA, which ensures that State-listed plant species are protected when State agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the CNPPA are not protected under CESA; however, impacts to endangered, rare, or threatened species, including plants, are evaluated under CEQA.

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Local Regulations

San Leandro General Plan

The Open Space, Parks and Conservation Element of the 2002 San Leandro General Plan contains a number of policies and actions related to the conservation of important biological and wetland resources, as shown in Table 4.3-1.

San Leandro Municipal Code

The San Leandro Municipal Code contains provisions related to the preservation or replacement of trees on development sites, as addressed in Section 4-1906, Existing Trees on Development Sites, in Article 19, Landscape Requirements of the Zoning Code. All trees with a trunk diameter equal or greater than 6 inches in diameter as measured 4½ feet above existing grade. Regulated trees are to be identified on-site plans, together with information on species, size and extent of drip line. The site plans are to indicate which trees are proposed for removal, and a “limit of grading” line, where applicable. A tree report may also be required, to be prepared by a certified arborist, providing additional information on tree health, appearance, and suitability for preservation. Decision-makers may require that significant trees, based on size, age, prominence and/or habitat value, and/or that replacement trees be provided as part of the final landscape plan for the project.

The Municipal Code also contains provisions related to the protection of monarch butterflies at the marina and golf courses. Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the Municipal Code reads as follows:

It is declared to be unlawful for any persons to molest or interfere with, in any way, the peaceful occupancy of the Monarch Butterflies during the entire time they remain within the San Leandro Marina, Tony Lema Golf Course and Marina Golf Course of the City of San Leandro, in whatever spot therein they may choose to stop, provided, however, that if said butterflies should at any time swarm in, upon, or near the private dwelling house or other buildings of a citizen of the City of San Leandro in such a way as to interfere with the occupancy and use of said dwelling or other buildings, that said butterflies may be removed, if possible, to another location upon the application of said citizen to the City Manager.

4.3.1.2 EXISTING CONDITIONS

Vegetation and Wildlife Habitat

The Project site has been extensively modified by past fill activity, and subsequent development with marina, riprap, roadways, structures, landscaping and golf course improvements along the shoreline of San Francisco Bay. Coastal saltmarsh, eel grass beds and other sensitive natural communities that most likely once characterized the area have been eliminated by these past fill activities. Scattered individual plants of the coastal salt marsh community have become established along the riprap slopes of the shoreline in some locations, including pickleweed (*Salicornia virginica*), saltgrass (*Distichlis spicata*), marsh gumplant (*Grindelia stricta* var. *angustifolia*), and alkali heath (*Frankenia salina*).

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TABLE 4.3-1 SAN LEANDRO GENERAL PLAN GOALS, POLICIES, AND ACTIONS PERTAINING TO BIOLOGICAL RESOURCES

Goal/Policy Number	Goal/Policy/Action Text
Policy 26.01	Ecosystem Management. Promote the long-term conservation of San Leandro’s remaining natural ecosystems, including wetlands, grasslands, and riparian areas. Future development should minimize the potential for adverse impacts to these ecosystems and should promote their restoration and enhancement.
Policy 26.02	Mitigation of Development Impacts. Require measures to mitigate the impacts of development or public improvements on fish and wildlife habitat, plant resources, and other valuable natural resources in the City.
Policy 26.03	Habitat Restoration. Encourage the restoration of native vegetation in the City’s open spaces as a means of enhancing habitat and reducing wildfire hazards.
Policy 26.04	Species of Special Concern. Ensure that local planning and development decisions do not damage the habitat of rare, endangered, and threatened species, and other species of special concern in the City and nearby areas.
Action 26.04-A	Biological Assessments. Require biological assessments for development in areas where special status species may be present. Require mitigation in accordance with state and federal regulations where potential adverse impacts exist.
Policy 26.05	San Leandro Shoreline Marshlands. Continue the restoration of the San Leandro Shoreline Marshlands as a unique natural area. The emphasis in this area should be on resource conservation, trails, and ecological study.
Action 26.05-A	San Leandro Shoreline Marshlands – Enhancement Program. Continue to monitor the progress of the San Leandro Shoreline Marshlands Enhancement Program. Conduct periodic assessments of hydrology, vegetation, and wildlife in this area, and make adjustments to the management program based on the findings.
Action 26.05-B	Predator Control Plan. Pursuant to the development agreement for Heron Bay, ensure that a predator control plan (controlling feral and domestic animals) is implemented in the San Leandro Shoreline Marshlands. Consider additional measures to improve marsh health, such as a cordgrass control plan.
Policy 26.06	Intergovernmental Coordination. Coordinate with the appropriate regional, state, and federal agencies and other organizations in their efforts to conserve and enhance ecological resources in San Leandro. Refer local projects to these agencies as required for their review and comment.

Source: San Leandro General Plan, Open Space, Parks, and Conservation Element.

Landscaping encompasses the golf course area and has been planted in scattered locations of the marina, composed of primarily non-native turf, groundcovers, shrubs and trees. Dominant tree species include: Monterey pine (*Pinus radiata*), blue gum eucalyptus (*Eucalyptus globulus*), black acacia (*Acacia melanoxylon*), and coast redwood (*Sequoia sempervirens*). Ruderal (weedy) grassland cover borders the managed greens and other landscaped areas, supporting non-native grasses and forbs such as wild oat (*Avena* spp.), bromes (*Bromus* spp.), lotus (*Lotus scoparius*), and English plantain (*Plantago lanceolata*). Invasive species such as sweet fennel (*Foeniculum vulgare*), yellow star thistle (*Centaurea solstitialis*), and tarweed (*Madia* sp.) are also present where routine maintenance has not been performed.

A drainage channel and two man-made ponds also occur on the golf course. Cattail (*Typha latifolia*) form a dense cover of freshwater marsh along the drainage channel, which extends for about 1,000 feet along the western edge of the golf course parallel to Monarch Bay Drive. Emergent vegetation is largely absent around the man-made ponds, which are carefully managed to minimize interruption to golf play.

The wildlife habitat values on the Project site have been greatly influenced by development and human activity. Impervious surfaces, turf, and routine maintenance limit protective cover and foraging

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opportunities. Wildlife in developed areas are typically acclimated to human activity, and include species common in urban and suburban habitats such as scrub jay, mourning dove, house finch, house sparrow, American robin, mockingbird, Norway rat, and house mouse. The mature trees provide roosting and potential nesting substrate for birds, and the grove of eucalyptus in the southeastern edge of the golf course provide winter roosting habitat for a colony of monarch butterflies, as discussed further below under Special-Status Species.

The scattered marshland plants along the riprap shoreline of the marina provide little habitat value for native wildlife, but the open waters of the bay provide foraging and resting opportunities for a variety of bird species including gulls, ducks and shorebirds. At low tides, invertebrate populations in exposed mudflats provide important foraging opportunities for resident and migratory shorebirds and waterfowl. The rock shoreline harbors small shore crabs and isopods and the intertidal and sub-tidal zone supports native oyster, numerous clams and mussels including Japanese littleneck and shot-shelled clams. The open waters of the bay provides dispersal and foraging opportunities for estuarine and marine fish and other aquatic life. Anglers along the shoreline frequently catch striped bass, California bat ray, white croaker, and leopard shark, as well as several surf perch species.

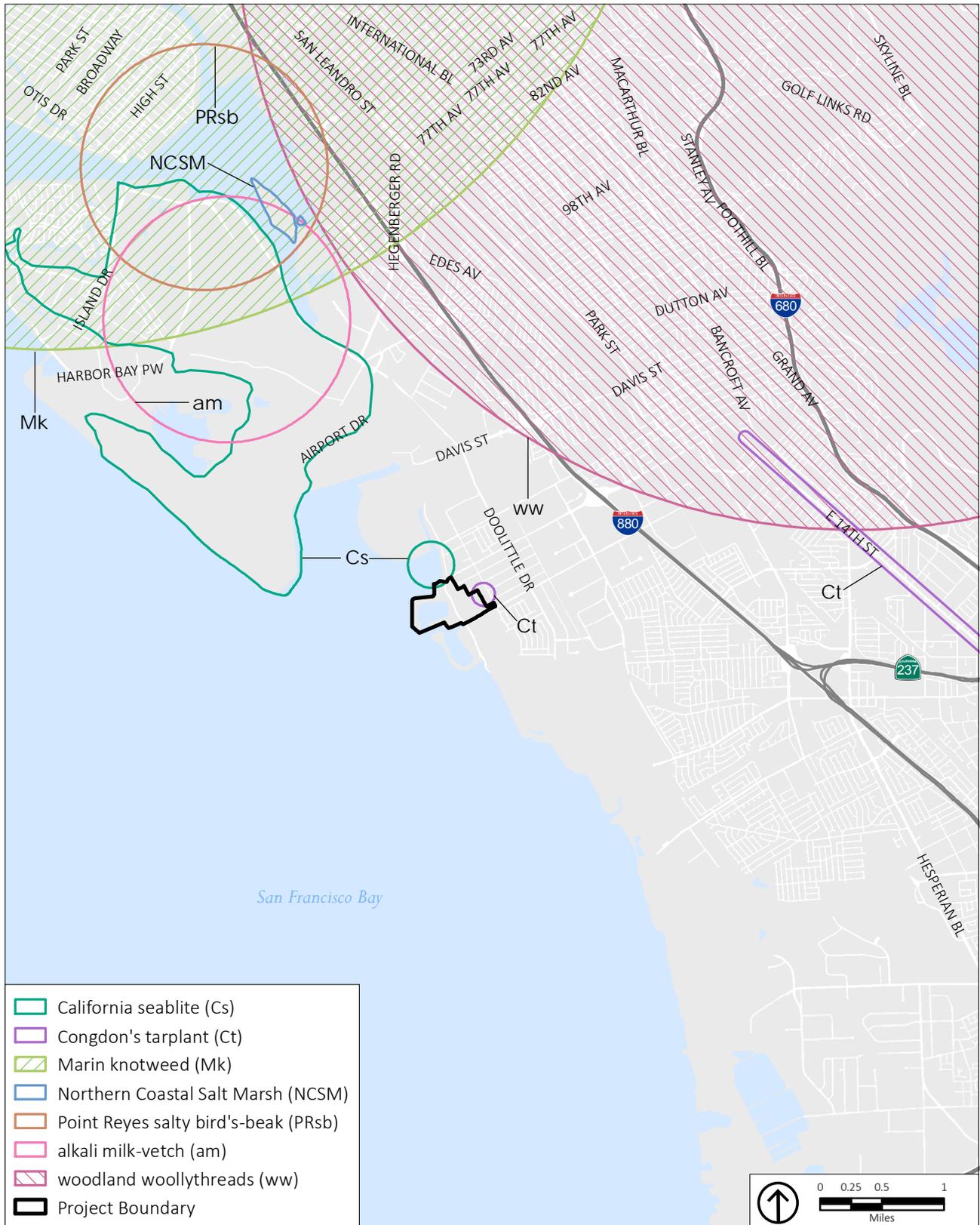
Special-Status Species

According to records maintained by the CNDDDB and other sources, numerous special-status species have been reported from the shoreline of San Leandro and the bay. Figures 4.3-1 and 4.3-2 show the reported occurrences of special-status plant and animal species, according to records maintained by the CNDDDB. Additional information on special-status species known or suspected from the site vicinity is provided in the 2007 *San Leandro Marina Opportunities and Constraints Analysis*,² although most of these suspected occurrences were reported from areas outside of the Project site, in the southern portion of the San Leandro Marina study area south of Monarch Bay Golf Course where natural marshland and wetland habitat remains. A table of special-status species known or suspected from the site vicinity, excerpted from the 2007 *San Leandro Marina Opportunities and Constraints Analysis* is contained in Appendix F.

Special-Status Animal Species

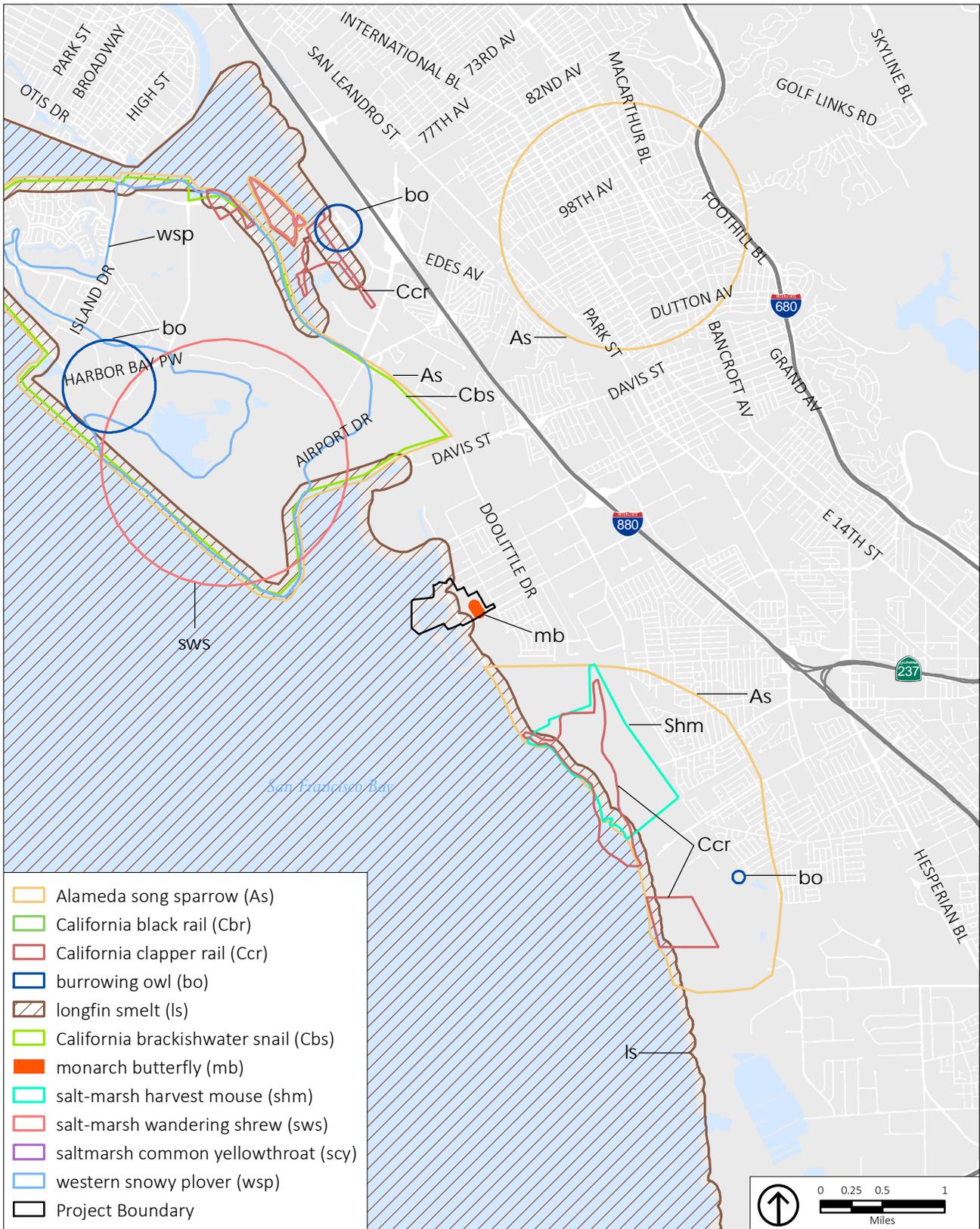
As indicated in Figure 4.3-2, most of the reported occurrences of special-status animal species from the surrounding area are typically associated with coastal salt marsh and aquatic habitat of the bay, which has long been extirpated from upland areas on the Project site. These include: the State and federally endangered California clapper rail (*Rallus longirostris obsoletus*), the federally threatened California black rail (*Laterallus jamaicensis coturniculus*), and the state and federally endangered salt-marsh harvest mouse (*Reithrodontomys raviventris*), as well as salt-marsh wandering shrew (*Sorex vagrans halicoetes*), Alameda song sparrow (*Melospiza melodia pusillula*), and salt-marsh common yellowthroat (*Geothlypis trichas*) all three of which are not listed under the Endangered Species Acts but are considered California Species of Special Concern (“SSC”) species by the CDFW.

² ESA, San Leandro Marina Opportunities and Constraints Analysis, 2007.



Source: California Natural Diversity Database, 2008; City of San Leandro, 2013; Alameda County, 2013; PlaceWorks, 2014.

Figure 4.3-1
Special-Status Plant Species



Source: California Natural Diversity Database, 2008; City of San Leandro, 2013; Alameda County, 2013; PlaceWorks, 2014.

Figure 4.3-2
Special-Status Animal Species

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Burrowing owl, also recognized as a SSC species, have been reported from the North Field at the Oakland Airport, and the state and federally endangered California least tern (*Sterna antillarum browni*) and the federally threatened western snowy plover (*Charadrius alexandrinus nivosus*) have been observed west of Runway 11/29 at the Oakland International Airport. Burrowing owl typically occurs in low grasslands, and marginally suitable habitat for this species occurs around the perimeter of the golf course on the Project site, although no occurrences have been reported in the past. California least tern and western snowy plover reportedly nested along the margins of the western runway at Oakland Airport, but haven't done so for over a decade and suitable nesting habitat for these species is absent on the Project site.

A winter roosting colony of monarch butterfly (*Danaus plexippus*) occurs in the grove of blue gum eucalyptus in the southeastern portion of the Project site. This species has no legal protective status under the Endangered Species Acts, but roosting colonies are recognized as important biological resources by the CDFW and are subject to CEQA review with a State-wide ranking by the CNDDDB of S3 or vulnerable (vulnerable in the state due to a restricted range, relatively few populations). According to monitoring performed by The Xerces Society from 2005 to 2009, an estimated 5,000 monarch butterflies overwintered in the rows of blue gum eucalyptus on the Project site, but this is a considerable reduction from the tens of thousands of monarchs observed in the late 1990s. The following provides a summary of the characteristic habitat and natural history of monarch butterflies, which are applicable to the wintering colony on the Project site.

Monarch butterflies are a migratory species that cannot survive the colder winter months in most parts of North America, and travel to their overwintering areas during the fall months. Monarchs that live west of the Rocky Mountains migrate to coastal areas of California, while those that live east of the Rockies travel to a few sites in the mountains of Central Mexico. In coastal California, overwinter sites range from northern Baja California to southern Mendocino County. In California, clustering behavior begins once migrating monarchs reach their overwintering sites in the fall. The duration of residence is generally used to differentiate the types of monarch wintering habitats, with sites that support clusters of wintering monarchs for a few days to a month are referred to as temporary habitats. Sites that host clusters of wintering monarchs for one to six months are referred to as overwintering habitats.

In the fall months, typically in September and October, numerous, generally small temporary aggregations are formed, especially in areas where nectar plants are plentiful. Monarchs at many of these sites disperse to part-term or full-term overwintering sites as nectar sources, air temperature, and day length decrease. Some sites may serve as overwintering sites one year and temporary sites another year, or a mixture of the two. Occasionally, previously utilized overwintering sites and/or temporary sites are abandoned for one or more seasons as a natural phenomenon.

Overwintering sites are characterized by groves of trees of mixed height and diameter. Often there is a small clearing within a stand of trees, or formed by a combination of the trees and surrounding topography, to provide shelter for the butterfly. These overwintering sites protect the butterfly from prevailing on-shore winds and freezing temperatures, and provide opportunities for sunning and other behaviors. The vegetation serves as a thermal "blanket" which moderates extreme weather conditions. At some locations, topographic features as well as nearby buildings or other man-made structures may provide some protection as well.

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Many of the best overwintering sites provide a heterogeneous mixture of habitat conditions and resultant microclimatic conditions that assist the Monarchs in surviving seasonal changes in climatic conditions during the winter. For example, overwintering habitat must provide wind-protected roost locations (usually tree branches that are 15 to 50 feet above ground), with buffered temperatures, relatively high humidity, and filtered sunlight throughout the fall and winter months. As weather conditions and exposure to sunlight vary over the winter months, high habitat heterogeneity at an overwintering site permits the Monarch roosts to satisfy their thermoregulatory needs by moving from tree to tree in response to changes in weather conditions. Thus during the early part of the overwintering period (October – November), when daily temperature maxima are relatively high, monarchs tend to cluster in locations that provide brief morning insolation, with mid-day and afternoon shade. Later in the season (December – February), when temperature maxima are lower, they tend to roost in trees that receive afternoon sunlight. Trees surrounding roost locations, known as windbreak or buffer trees, provide both wind protection and ameliorate microclimatic conditions near the roost trees.

A number of special-status fish species are known from the larger San Francisco Bay and may occasionally disperse through the open waters in the site vicinity. Although spawning and rearing habitat is absent on the Project site, these species could occasionally disperse or seasonally be present along the shoreline or in the marina basin. These include: Central California Coastal steelhead (*Oncorhynchus mykiss*), green sturgeon (*Acipenser medirostris*), Delta smelt (*Hypomesus transpacificus*), Sacramento splittail (*Pogonichthys macrolepidotus*), Central Valley spring-run chinook salmon (*Oncorhynchus tshawytscha*), and longfin smelt (*Spirinchus thaleichthys*). Steelhead, green sturgeon, and Delta smelt are federally listed threatened species, longfin smelt is state-listed as threatened, and the remainder are recognized as California SSC by the CDFW.

In addition, a number of native bird species could possibly nest in the existing trees and undeveloped areas on the Project site, particularly the mature pines and blue gum eucalyptus on the golf course. If any active nests are present or new nests are established in the future, they would be protected under the federal Migratory Bird Treaty Act (MBTA) while in use (see discussion above under Federal Regulations in Section 4.3.1.1, Regulatory Framework). Active nests of native bird species are also protected under State Fish and Game Code. Of particular concern is the potential for tree nesting by raptors such as red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), great-horned owl (*Bubo virginianus*), and white-tailed kite (*Elanus leucurus*) and nests of burrowing owl, which nests in ground squirrel burrows and other locations on the ground, and northern harrier (*Circus cyaneus*) which typically nests in shrubs and marshland cover. Raptors tend to be susceptible to human disturbance in the vicinity of the nest location.

Special-Status Plant Species

As indicated in Figure 4.3-1, special-status plant species reported from the site vicinity include: alkali milk vetch (*Astragalus tener* var. *tener*), Point Reyes salty bird's-beak (*Cordylanthus maritimus* ssp. *palustris*), Congdon's tarplant (*Hemizonia parryi* ssp. *congdonii*), California seablite (*Suaeda californica*), among others. None of these species have any state or federally listing status under the Endangered Species Acts, but are maintained on CNPS List 1B, (rare, threatened, or endangered in California and elsewhere). A historic occurrence of Congdon's tarplant was reported from just east of the Project site, but this population has presumably been extirpated by past residential and other development activities. No

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occurrences of special-status plant species are suspected to occur on the Project site given the extent of past and on-going habitat disturbance.

Wetlands and Waters

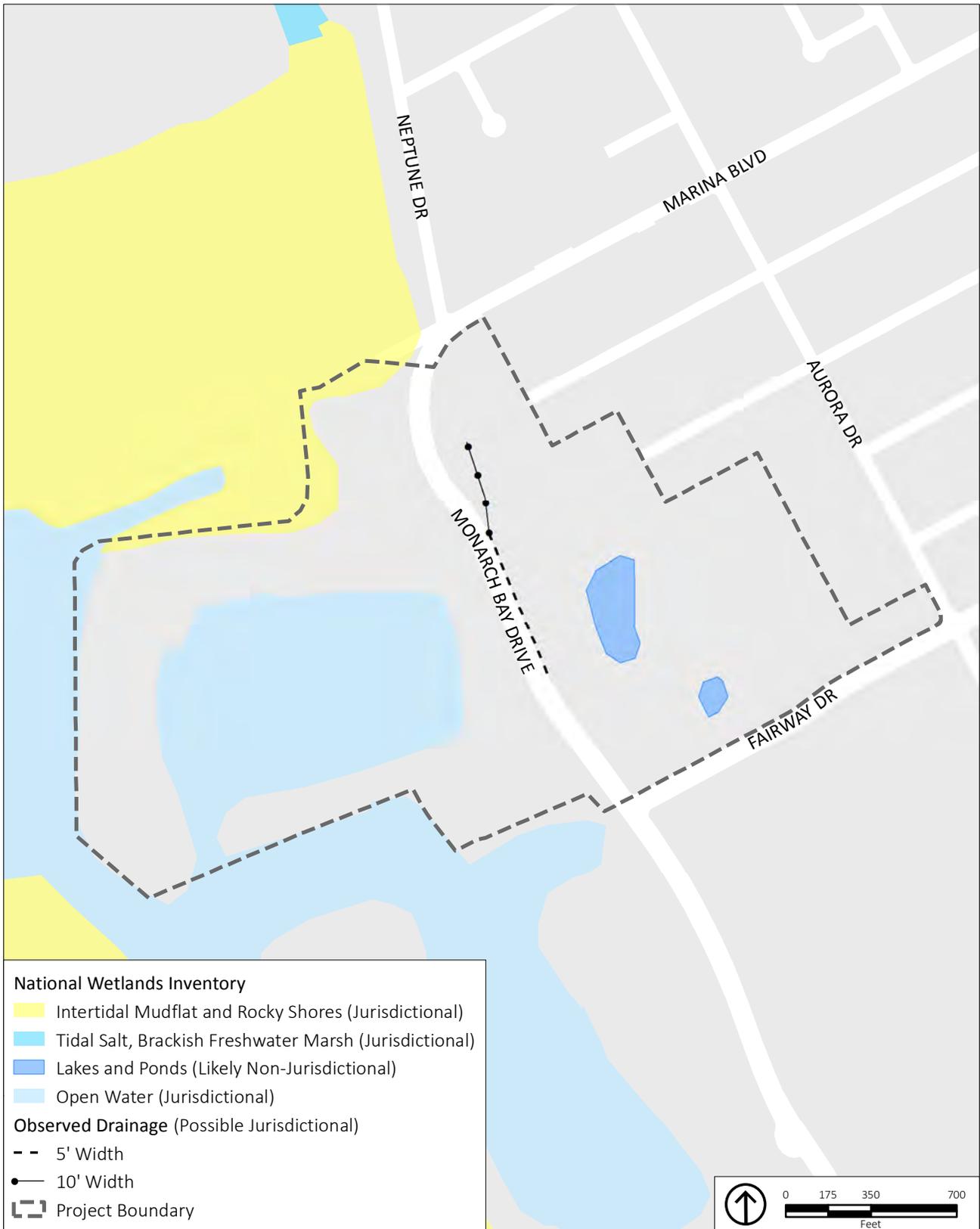
Portions of the Project site are considered wetlands or unvegetated waters of the U.S. (see discussion above under Clean Water Act and California Fish and Game Code in Section 4.3.1.1 Regulatory Framework). Figure 4.3-3 shows the extent of wetlands as mapped by the National Wetland Inventory, which uses a broad definition of wetlands that includes unvegetated features such as the open waters of the San Francisco Bay. These include areas of tidal and intertidal open waters associated with San Francisco Bay, which occupy an estimated 2.54 acres of the Project site, generally below the Mean High Water elevation. The two ponds on the golf course occupy an estimated 1.82 acres. Because they are man-made and not hydrologically connected to navigable waters such as the bay, and generally do not support any wetland vegetation, they are most likely not regulated by the Army Corps, RWQCB, and CDFW. A final determination on whether they are considered regulated waters would have to be made by the regulatory agencies. The northern, larger pond is lined and receives reclaimed water from the City's treatment plant for use in irrigating the golf course turf. The smaller, southern pond is unlined and receives irrigation and stormwater runoff in the winter rainy season.

In addition to the features mapped as part of the National Wetland Inventory, a drainage channel was also observed along the western edge of the golf course as indicated in Figure 4.3-3, extending for a distance of about 1,000 feet and supporting a dense cover of cattail marsh. The drainage appears to be of man-made origins, but conveys surface water flows that presumably are discharged into the marina. The Army Corps would have to make a determination on whether the drainage channel and on-site man-made on-site ponds are regulated waters of the U.S.

4.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, the Project would result in a significant biological resources impact 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 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 (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially 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. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.



Source: National Wetlands Inventory (NWI), 1997; City of San Leandro, 2013; Alameda County, 2013; PlaceWorks, 2014; Environmental Collaborative, 2014.

Figure 4.3-3
Potential Wetlands and Waters

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6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

4.3.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to biological resources.

BIO-1 **The Project would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service.**

Construction activities associated with Project implementation could affect a number of special-status species known or suspected from the Project site, including the winter roost colony of monarch butterflies, special-status fish species that could be present in the open water habitat of San Francisco Bay, and possibly the nests of birds when in active use which are protected under State and federal regulations. Due to the extent of past and on-going development, no other special-status species are suspected to occur on the Project site with the possible exception of occasional fly-overs by bird species dispersing along the shoreline of the bay in search of suitable habitat. The following provides a summary of potential impacts on special-status species known or suspected from the Project site.

Monarch Butterflies Overwintering Colony

The Project avoids the stand of blue gum eucalyptus where the winter roosting colony of monarch butterflies congregates at the eastern edge of the gold course. No specific plans are proposed to remove or alter any of the trees in this area, or the surrounding golf course and ruderal grasslands at the eastern edge of the Project site. However, the South Golf Course Residential component of the Project includes new townhomes located immediately adjacent to the row of blue gum eucalyptus and pines to the west that most likely provide important wind buffering functions, and could provide nectaring and resting locations for individual butterflies. Although it appears these new residences would avoid most of the dripline of this row of buffering trees, detailed information on the location of individual tree trunks and relationship to the limits of proposed construction have not been provided and there remains a possibility that construction and/or vegetation management activities by future residents could adversely affect these trees and result in indirect adverse effects on the butterfly colony. Changes in microclimate, including removal or pruning of important buffer trees, could lead to further decline or eventual loss of the colony if adequate controls are not taken. Short-term impacts such as construction-generated fumes and dust could adversely affect roosting butterflies if construction is initiated or performed in close proximity during the overwintering period, generally from October 1 to March 1. This would be considered a *significant* impact.

Impact BIO-1A: Proposed development could adversely affect the monarch butterfly winter roosting habitat if adequate controls on tree removal and pruning are not implemented.

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Mitigation Measure BIO-1A: Ensure Protection of Monarch Butterfly Colony. Proposed development shall be designed to avoid adverse impacts on monarch butterfly winter roosting habitat, including controls on removal and pruning of trees in the southeastern portion of the Project site where the monarch butterfly overwintering colony is located. A Monarch Butterfly Roosting Habitat Protection Program (MBRHPP) shall be prepared by a qualified biologist and ensure adequate avoidance and protection of the winter roosting colony, consistent with the intent of Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the San Leandro Municipal Code. The MBRHPP shall be submitted as part of the Site Plan Review and/or tentative map application, whichever is first, and shall include the following components:

- The MBRHPP shall be prepared by a qualified biologist experienced in management of monarch butterfly colonies in California, and shall describe existing winter roosting colony habitat essential to the monarch butterfly colony and required measures taken to ensure both roosting and wind buffering trees are adequately protected.
- All mature blue gum eucalyptus and pine trees in the colony and along the east edge of the South Golf Course Residential development shall be preserved and protected as part of the MBRHPP, with trunk locations and edge of canopy clearly mapped by engineered survey in relation to proposed building footprints, landscaping and other improvements that may otherwise disrupt their function in buffeting winds.
- As necessary to protect the wind buffering trees, the eastern edge of the proposed South Golf Course residential area may require relocation as part of the MBRHPP to provide a larger setback if there is a risk to these trees as a result of construction activities or future maintenance for fire fuel management, landscape maintenance, and other practices. Where private yards and/or common open space associated with the South Golf Course residential area extends under the canopy of the buffering trees, appropriate CCRs shall be developed to ensure long-term protection as part of future maintenance activities.
- The MBRHPP shall identify restrictions and seasonal controls on construction, tree removal, and vegetation management within 200 feet of the edge of trees known to support the winter roosting colony, including tree removal, pruning, and herbicide application, and appropriate timing of construction and required management within this zone. Grading and equipment operation, any tree removal, pruning, or herbicide application in the vicinity shall be restricted from August 1 through March 31 to prevent any inadvertent disturbance to the winter roosting colony.
- The MBRHPP shall be submitted for review and approval as part of the Site Plan Review and/or tentative map application for the South Golf Course Residential development.

Significance After Mitigation: Less than significant.

Special-Status Fish Species

The Project would include improvements to areas of tidally influenced open water, and could have direct and indirect effects on a number of special-status fish species, such as Central California Coastal steelhead, green sturgeon, Delta smelt, Sacramento splittail, Central Valley spring-run Chinook salmon, and longfin smelt, if present in the area during the time of construction. Project-related improvements that could affect open water habitat of the bay include modifications to the existing riprap shoreline,

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removal of the existing pilings, docks and piers in the existing marina, creation of enhanced natural shoreline along the interior of the existing marina, installation of new piers, docks and pedestrian bridge over the mouth of the entrance to the existing marina, and installation of an aeration fountain to improve water quality in the existing marina basin. Construction could result in disturbance to aquatic habitat of the bay, requiring drilling and excavation for pier/dock installation and shoreline modifications, and suspending silts and other substrate within the construction zone. This could result in a temporary reduction in water quality, or inadvertent injury or loss of individual special-status fish species, if present within the construction zone. The new piers and docks would shade areas of open water, but the removal of the existing dock system in the marina basin would result in a substantial net reduction in shading of open water habitat as part of the Project. Details of the Aeration fountain are not available, but special-status and other fish species could be routinely entrained in the pumping system if adequate screening at the intake locations is not provided and maintained. Appropriate construction avoidance measures would be necessary to prevent possible loss of one or more of these species, and appropriate authorizations may be required from NOAA Fisheries, USFWS, and/or CDFW where “take” of special-status fish species may occur as a result of the in-water activities of the Project. This would be considered a *significant* impact.

Impact BIO-1B: Proposed development could result in inadvertent loss of special-status fish species and other aquatic species as part of in-water construction activities if adequate controls are not implemented.

Mitigation Measure BIO-1B: Prevent Inadvertent Loss of Special-Status Fish and Aquatic Life.

Appropriate construction controls and restrictions shall be taken to prevent inadvertent loss of special-status fish species and other aquatic life as a result of construction activities within or near areas of tidal influence and open water habitat of San Francisco Bay to avoid possible inadvertent take of Central California Coastal steelhead, green sturgeon, Delta smelt, Sacramento splittail, Central Valley spring-run chinook salmon, and longfin smelt, if present in the area during the time of construction. This shall be accomplished with the following provisions:

- Adequate measures shall be taken to minimize disturbance and sedimentation in aquatic habitat of the bay, which may include installation of silt curtains around in-water construction zones, restrictions on in-water operations to low tide periods, and timing restrictions for in-water construction, among other possible controls and restrictions.
- Any pumping as part of dewatering construction areas or as part of the proposed aeration fountain shall be adequately screened according to the latest screening guidelines of the CDFW, USFWS, and NOAA Fisheries to prevent entrainment of special-status fish and other aquatic life during their operation.
- Any in-water construction activities shall be restricted to the period from June 15 through October when stray or dispersing special-status fish species would most likely not be expected within the affected areas.
- The applicant shall obtain all necessary authorizations from the CDFW, NOAA Fisheries, and USFWS as required by federal and State law for potential harm to special-status fish species. Such authorization would be obtained as a result of interagency coordination through the Army Corps Section 404 consultation and the CDFW Section 2081 Incidental Take Permit process. The Project shall adhere to any additional conditions and restrictions required as part of the authorizations from regulatory agencies.

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Significance After Mitigation: Less than significant.

Nesting Birds

The mature trees, dense landscaping, and even the exterior of the existing buildings to be demolished could be used for nesting by raptors and more common bird species. These nests would be protected under the MBTA and California Fish and Game Code when in active use. The MBTA prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the USFWS; this prohibition includes whole birds, parts of birds, and bird nests and eggs. Tree and vegetation removal, building demolition, and other construction activities during the breeding season could result in the incidental loss of fertile eggs or nestlings or nest abandonment if any active nests are present. This would be considered a *significant* impact.

Impact BIO-1C: Proposed development could result in inadvertent loss of bird nests in active use, which would conflict with the federal Migratory Bird Treaty Act and California Fish and Game Code if adequate controls and preconstruction surveys are not implemented.

Mitigation Measure BIO-1C: Ensure Avoidance of Bird Nests in Active Use. Tree removal, landscape grubbing, building demolition, and other construction activities, such as grading and utility installation shall be performed in compliance with the Migratory Bird Treaty Act and relevant sections of the California Fish and Game Code to avoid loss of nests in active use. This shall be accomplished by scheduling tree removal and building demolition outside of the bird nesting season (which occurs from February 1 to August 31) to avoid possible impacts on nesting birds if new nests are established in the future. Alternatively, if tree removal and building demolition cannot be scheduled during the non-nesting season (September 1 to January 31), a pre-construction nesting survey shall be conducted. The pre-construction nesting survey shall include the following:

- A qualified biologist (Biologist) shall conduct a pre-construction nesting bird (both passerine and raptor) survey within seven calendar days prior to tree removal, landscape grubbing, other construction activities and/or building demolition.
- If no nesting birds or active nests are observed, no further action is required and tree removal, landscape grubbing, other construction activities, and building demolition shall occur within seven calendar days of the survey.
- Another nest survey shall be conducted if more than seven calendar days elapse between the initial nest search and the beginning of tree removal, landscape grubbing, other construction activities and building demolition.
- If any active nests are encountered, the Biologist shall determine an appropriate disturbance-free buffer zone to be established around the nest location(s) until the young have fledged. Buffer zones vary depending on the species (i.e., typically 75 to 100 feet for passerines and 300 feet for raptors) and other factors such as ongoing disturbance in the vicinity of the nest location. If necessary, the dimensions of the buffer zone shall be determined in consultation with the California Department of Fish and Wildlife.
- Orange construction fencing, flagging, or other marking system shall be installed to delineate the buffer zone around the nest location(s) within which no construction-related equipment or

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operations shall be permitted. Continued use of existing facilities such as surface parking and site maintenance may continue within this buffer zone.

- No restrictions on grading or construction activities outside the prescribed buffer zone are required once the zone has been identified and delineated in the field and workers have been properly trained to avoid the buffer zone area.
- Construction activities shall be restricted from the buffer zone until the Biologist has determined that young birds have fledged and the buffer zone is no longer needed.
- A survey report of findings verifying that any young have fledged shall be submitted by the Biologist for review and approval by the City of San Leandro prior to initiation of any tree removal, landscape grubbing, building demolition, and other construction activities within the buffer zone. Following written approval by the City, tree removal, and construction within the nest-buffer zone may proceed.

Significance After Mitigation: Less than significant.

BIO-2 The 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.

No riparian or other sensitive natural community types are present on the Project site, and none would be affected by the Project. Coastal salt marsh and well-developed riparian habitat are absent, and existing vegetative cover is generally limited ornamental landscaping, including areas of turf, shrubs and groundcovers and tree plantings. The narrow band of freshwater marsh along the drainage channel at the western edge of the golf course is dominated by cattail, which is an opportunistic species that quickly colonizes areas with permanent to semipermanent surface water. This feature may be a regulated wetland, and would receive protection as such if jurisdictional, as discussed further below under BIO-3.

Applicable Regulations:

- None

Significance Before Mitigation: No impact.

BIO-3 The Project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Implementation of the Project would result in direct and indirect effects on jurisdictional wetlands and other waters. This includes disturbance to areas in open water and the shoreline of San Francisco Bay and upland areas in the golf course. Modification in areas within or adjacent to tidal influence includes removal of existing pilings and docks, demolition of the existing Harbor Master office, construction of new docks and launching piers, installation of the aeration fountain in the middle of the marina basin, and

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changes to the existing riprap shoreline to accommodate the proposed enhanced natural shoreline areas, perched beach and steps, and pedestrian bridge at the mouth of the existing marina basin. Details on the extent of dredging and fills in tidal areas and adjacent shoreline have not yet been refined as part of the project, but encompass most of the shoreline to the existing marina basin and several new piers and promenade treatments along the shoreline to the bay. Modifications below the Mean High Water would be regulated activities subject to authorization from the Army Corps and RWQCB. Fills in the golf course area include culverting of a portion of the drainage channel along the east side of Monarch Bay Drive and eliminating the southern pond. An estimated 600 linear feet of the existing man-made drainage ditch in the golf course area (see Figure 4.3-3) would also be filled to accommodate the North Golf Course Residential area, affecting an estimated 0.11 acre of cattail dominated freshwater marsh. Although it is a man-made drainage ditch, based on the presence of wetland vegetation and hydrologic connection to the bay, it appears this feature may be considered jurisdictional wetlands by the Army Corps and/or CDFW. The southern pond would also be filled to accommodate the South Golf Course Residential area. However, this pond is a man-made waterbody that contains no prominent wetlands and appears to be hydrologically isolated, and may therefore not be a jurisdictional water regulated by the Army Corps, RWQCB and/or CDFW.

Modifications to regulated waters would require appropriate authorizations from State and federal regulatory agencies, including the Army Corps and RWQCB under Section 404 and 401 of the Clean Water Act, and possibly CDFW under the Streambed Alteration Agreement program. Further review would be provided by these regulatory agencies when a permit application was formally submitted for authorization of activities within jurisdictional limits. If regulated wetland habitat is affected, possibly including the linear drainage channel on the east side of Monarch Bay Drive, a compensatory mitigation program will likely be required as part of the regulatory agency authorizations. A program to monitor and maintain any created habitat provided as mitigation would be a requirement of the regulatory agency authorizations, ensuring adequate compensatory mitigation and successful establishment of any replacement marshland and adjunct upland vegetation. As discussed in Section 4.8, Hydrology and Water Quality, best management practices (BMPs) would be utilized to prevent any construction-generated sediments or pollutants from entering the surrounding wetlands and open water habitat, although no stormwater pollution program has been prepared for the Project. Overall, if the waters described above are determined to be regulated waters and not exempt as man-made features, this would be considered a *significant* impact.

Impact BIO-3: Proposed development would result in fills and modifications to jurisdictional waters, which would require appropriate controls, compensatory mitigation, and regulatory authorizations.

Mitigation Measure BIO-3: Provide Compensatory Mitigation for Wetland Modifications. A compensatory mitigation program shall be developed and implemented to provide adequate mitigation for jurisdictional waters affected by proposed improvements. A jurisdictional wetland delineation shall be prepared by a qualified wetland specialist and submitted for verification by the Army Corps. A Wetland Protection and Replacement Program (WPRP) shall be prepared by the qualified wetland specialist and implemented to provide compensatory mitigation at a minimum 2:1 ratio where wetland habitat is affected, shall minimize disturbance to unvegetated waters, and shall be reviewed and approved by regulatory agencies. The WPRP shall include appropriate implementation measures to prevent inadvertent loss and degradation of jurisdictional waters to be

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protected, and replacement for those wetland features eliminated or modified as a result of development. The WPRP shall contain the following components:

- Where verified waters of the U.S. are present and cannot be avoided, authorization for modifications to these features shall be obtained from regulatory agencies with jurisdiction. This includes the Army Corps through the Section 404 permitting process where waters of the United States are affected by the Project and the RWQCB as part of the Section 401 Certification process. Together with a Streambed Alteration Agreement (SAA) secured from CDFW, if required as part of the SAA Notification process for proposed fills to the man-made drainage and possibly the pond on the golf course. All conditions required as part of the authorizations by the Army Corps, RWQCB, and CDFW shall be implemented as part of the project.
- Consultation or incidental take permitting may be required under the California and federal Endangered Species Acts. The applicant shall obtain all legally required permits or other authorizations from the USFWS, NOAA Fisheries, and CDFW under the Endangered Species Acts.
- Install orange construction fencing around the boundary of all wetland areas and waters to be preserved at the interface with proposed fills and grading so that they are not disturbed during construction. The fencing shall be placed a minimum of 25 feet out from the boundary of the wetlands/waters but may need to be adjusted if restoration activities are to be conducted within this area. Grading, construction, and restoration work within the wetland/waters buffer zones shall be conducted in a way that avoids or minimizes disturbance of existing wetlands and aquatic habitat.
- A qualified biologist/restoration specialist shall be available during construction to provide situation-specific wetland avoidance measures or planting recommendation, as needed.
- Success criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures in the WPRP shall be specified. Monitoring shall be conducted by the qualified wetland specialist for a minimum of five years and continue until the success criteria are met. Permanent monitoring transects shall be established as part of the program and vegetation data collected in the spring and summer months when plant identification is possible. Photo stations shall be established along each monitoring transect, and photographs taken every year during the required monitoring period.
- Annual monitoring reports shall be prepared by the qualified wetland specialist and submitted to resource agency representatives and the City's Planning Services and Building and Safety Services Divisions by December 31 of each monitoring year for a minimum of five years or longer, until the defined success criteria are met. The annual report shall summarize the results of the monitoring effort, performance standards, and any required contingency measures, and shall include photographs of the monitoring transects and program success. Maps shall be included in the monitoring report to show the location of monitoring transects and photo stations.

Significance After Mitigation: Less than significant.

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BIO-4 The Project would not interfere substantially 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 Project would result in modifications to existing wildlife habitat but would not interfere with existing movement opportunities and use of native wildlife nursery areas. Most of the Project site is developed with parking lots, structures, irrigated turf of the golf course, and landscaping. Wildlife habitat values are generally limited, with the exception of the open waters of marina basin and San Francisco Bay, which would be improved through removal of much of the existing dock system and creation of enhanced natural shoreline along lower segments of the existing riprap. Most of the existing mature trees would be retained, including the monarch butterfly roosting habitat at the southeast edge of the golf course, serving to protect the resting, perching, and foraging opportunities they provide wildlife. New landscaping would replace areas where existing trees, shrubs and groundcovers would be removed, serving to replace their habitat functions for birds and other wildlife common in suburban habitats. Potential adverse impacts on fish and other aquatic species during construction would be avoided through restrictions implemented as conditions of approval of regulatory agencies such as the Army Corps and RWQCB, as addressed above under Impact BIO-1 and Impact BIO-3, which would ensure any substantial impacts on special-status species and more common aquatic species are adequately avoided. These include restrictions on timing of in-water dredging and construction activities to avoid periods when listed species have a higher likelihood of being present, typically from October 15th to July 1st. This would be considered a *less-than-significant* impact.

Applicable Regulations:

- Clean Water Act
- California Endangered Species Act
- National Pollutant Discharge Elimination System Program

Significance Before Mitigation: Less than significant.

BIO-5 The Project could conflict with local ordinances protecting biological resources, such as the City's tree preservation ordinance and monarch butterfly protection ordinance.

In general, the Project would not conflict with any relevant goals and policies in the City of San Leandro General Plan related to protection of biological and wetland resources. Potential impacts on special-status species, wetlands or important wildlife resources would be addressed through adherence to relevant policies and actions in the General Plan, implementation of recommended mitigation measures, and through habitat enhancement efforts undertaken as part of implementing the Project, including the natural shoreline element along the southwest and southeast interior borders of the harbor basin.

Relevant policies and actions from the General Plan particularly applicable to the Project are listed above in Table 4.3-1. Consistency with Policies 26.02 and 26.04, and Action 26.04-A would be achieved through compliance with mitigation measures developed as part of this EIR. As discussed below under Section 4.3.5, this includes Mitigation Measure BIO-1A to address potential impacts on monarch butterfly,

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Mitigation Measure BIO-1B to address potential impacts on special-status fish species, Mitigation Measure BIO-1C to address potential impacts on possible bird nests in active use, Mitigation Measure BIO-3 to address potential impacts on any regulated waters, Mitigation Measure BIO-5 to address potential impacts on regulated trees. The biological resource assessment conducted by the EIR biologist and provided as part of this EIR serves to address the requirement for a biological assessment to determine presence or absence of any special-status species as called for in Action 26.04-A. Very little natural habitat remains on the Project site, and areas of “enhanced natural shoreline” are to be incorporated into the Project, consistent with Policy 26.01 and 26.03.

A number of trees would be removed to accommodate the Project, including scattered trees in the reconfigured parking area at the marina and trees planted on the golf course area. These consist of ornamental species planted as landscaping, including Monterey pine, fruitless pear, and blue gum eucalyptus. Many of these trees would qualify as a regulated tree under Section 4-1906, Existing Trees on Development Sites, in Article 19, Landscape Requirements of the City’s Zoning Code. According to the landscape requirements, all trees with a trunk diameter of six inches or greater are to be identified on site plans, together with information on species, size and extent of drip line. The site plans are to indicate which trees are proposed for removal, and a “limit of grading” line, where applicable. A tree report, prepared by a certified arborist, may also be required by the City to provide additional information on tree health, appearance, and suitability for preservation. The City may require that replacement trees be provided as part of the final landscape plan for removal of trees of significant size that cannot be avoided. Until a thorough inventory of all regulated trees is prepared, and a review of the accompanying tree report and final landscape plans showing proposed replacement provided by the applicant, there remains a possible conflict with the relevant section of the Zoning Code over the possible loss of trees of significant size. This would be considered a *significant* impact.

Impact BIO-5A: Proposed development would result in removal of trees regulated under City Ordinance, and possible damage to other trees unless adequate controls are implemented.

Mitigation Measure BIO-5A: Tree Protection and Replacement. The Project shall comply with Section 4-1906, Existing Trees on Development Sites, in Article 19, Landscape Requirements of the City of San Leandro Zoning Code. Compliance with the Zoning Ordinance shall be achieved through adherence with the following provisions:

- All trees with a trunk diameter of 6 inches or greater shall be identified on site plans prior to site plan approval, together with information on species, size, assigned tree number, trunk location determined by engineer survey, and extent of drip line.
- A tree report shall be prepared by a certified arborist prior to site plan approval, providing additional information on tree health, appearance, and suitability for preservation of each regulated tree.
- All grading, improvement plans, and construction plans prepared for building permits shall clearly indicate trees proposed to be removed, altered, or otherwise affected by development construction, together with the “limit of grading” line.
- Adequate measures shall be defined in the tree report to protect all trees to be preserved. This shall include installation of temporary construction fencing at the perimeter of the protected area, restrictions on construction within the fenced areas unless approved as a condition of the

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application and performed under the supervision of the certified arborist, and prohibition on parking or storing of vehicles and other construction equipment within the protected area.

- Where avoidance of a regulated tree is not feasible, replacement tree plantings shall be provided prior to site plan approval as part of the final landscape plan.

Significance After Mitigation: Less than significant.

As discussed under Impact BIO-1, the Project could also result in adverse impacts on the monarch butterfly colony if appropriate avoidance measures aren't implemented in accordance with Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the Municipal Code. The proposed South Golf Course residential component of the Project includes new townhomes located adjacent to the row of blue gum eucalyptus and pines to the west of the monarch butterfly roosting area, and these trees most likely provide important wind buffering functions, and could provide nectaring and resting locations for individual butterflies. Without property controls and management, proposed construction and/or vegetation management activities by future residents could adversely affect these trees and result in indirect adverse effects on the butterfly colony, which would be in conflict with the provisions in the Municipal Code. This would be considered a *significant* impact.

Impact BIO-5B: Proposed development would result in removal of trees regulated under City Ordinance, and interfere with Section 4-1-1000, Interference with Monarch Butterflies Prohibited, of the Municipal Code.

Mitigation Measure BIO-5B: Implement Mitigation Measure BIO-1A to ensure protection of trees supporting Monarch Butterfly colony.

Significance After Mitigation: Less than significant.

BIO-6	The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.
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The Project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. No such plans have been adopted encompassing the Project vicinity, and no impacts are anticipated.

Applicable Regulations:

- None.

Significance Before Mitigation: No impact.

4.3.4 CUMULATIVE IMPACT DISCUSSION

BIO-7	The Project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to biological resources.
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The potential impacts of the Project on biological resources tend 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 a particular site. This includes preservation of well-developed native vegetation (e.g., marshlands, native grasslands, oak woodlands, riparian scrub and woodland, etc.), populations of special-status plant or animal species, and wetland features (including seasonal wetlands and drainages). Environmental review of specific development proposals in the vicinity of a development site should serve to ensure that important biological resources are identified, protected, and properly managed, and to prevent any significant adverse development-related impacts, including development for the remaining undeveloped lands in the surrounding incorporated and unincorporated lands. Adherence to relevant policies and actions from the City of San Leandro General Plan call for identification and protection of sensitive biological resources, and adequate mitigation and resource agency authorization where potential impacts exist for a project. In general, anticipated development in the Project site vicinity would be located in areas that have already been heavily modified by past development, and do not contain sensitive biological resources.

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 can be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, private open space, or undeveloped properties. New development in the west Alameda County area encompassing San Leandro would result in further conversion of existing natural habitats to urban and suburban conditions, limiting the existing habitat values of the surrounding area. This could include further loss of wetlands and sensitive natural communities, reduction in essential habitat for special-status species, removal of mature native trees and other important wildlife habitat features, including obstruction of important wildlife movement corridors. Additional development may contribute to degradation of the remaining aquatic habitat in the creeks and other open waters of the San Francisco Bay if adequate protective measures are not implemented. Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality. However, other development would similarly be subject to regulatory controls on erosion and sedimentation after grading, and compliance with numerous water quality regulations. Compliance with this comprehensive regulatory scheme would minimize the potential for water quality degradation for cumulative development to a *less-than-significant* level.

However, with regard to future development and its relationship to surrounding habitat, most of the Project site vicinity is already extensively disturbed by urban and suburban uses. Wildlife in the area has already become acclimated to human activity, and proposed development is not expected to disrupt important movement corridors or access to surrounding habitat. Monarch butterflies are experiencing significant declines throughout their range in North America, but the monarch butterfly colony on the Project site would be avoided by proposed construction with the appropriate controls recommended to preserve buffer trees, and the Project would have no contribution to cumulative impacts on this species. The shoreline habitat of the marina and bay would be enhanced as part of the Project, with appropriate controls during construction and operation to avoid and minimize any potential adverse contribution to decline in water quality and aquatic habitat of the San Francisco Bay. Therefore, the Project's contribution to cumulative impacts on biological resources would be *significant* and the mitigations recommended throughout this chapter would serve to address significant Project-specific impacts and their contribution to cumulative impacts.

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Impact BIO-7: Proposed development would result in a cumulative impact with regard to biological resources.

Mitigation Measure BIO-7: Implement Mitigation Measures BIO-1A, BIO-1B, BIO-1C, BIO-3, BIO-5A, and BIO-5B.

Significance After Mitigation: Less than significant.

4.4 CULTURAL RESOURCES

This chapter discusses the regulatory framework and existing conditions of the Project site and analyzes potential impacts to cultural resources that could result from buildout of the Project. Cultural resources include historical, architectural, archaeological, and paleontological resources.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

This section describes the policies and regulations that apply to cultural resources in the City of San Leandro.

Federal Regulations

National Historic Preservation Act of 1966

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 are not eligible for the National Register unless specified as of exceptional importance. 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

Section 15064.5 of the CEQA Guidelines 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, 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, or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, 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 analysis of California, as supported by substantial evidence in the light of the whole record.

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- The lead agency determines that the resource may be a historical resource as defined by the Public Resources Code 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, Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines 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 will 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 Public Resources Code 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 provisions not only protect such remains from disturbance, vandalism, and inadvertent destruction but also establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project. Such discoveries would 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 (California Register)

The California Register establishes a list of properties to be protected from substantial adverse change (Public Resources Code Section 5024.1). The State Office of Historic Preservation (OHP) 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, 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 historic resources, historical resources identified in historic surveys conducted in accordance with OHP procedures, 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.

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California Historical Building Code, California Code of Regulations, Title 24, Part 8

The California Historical Building Code, defined in Sections 18950 to 18962 of Division 13, Part 2.7 of Health, and Safety Code, provides regulations and standards for the rehabilitation, preservation, restoration (including related construction), or relocation of historical buildings, structures, and properties deemed by any level of government as having importance to the history, architecture, or culture of an area.

Health and Safety Code Sections 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the California NAHC.

California State Senate Bill 18

Senate Bill (SB) 18, which went into effect January 1, 2005, set forth requirements for local governments (cities and counties) to consult with Native American tribes to aid in the protection of traditional tribal cultural places through local land use planning. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early stage of planning for the purpose of protecting or mitigating impacts to cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy prior to the making of individual site-specific, project-level land use designations by a local government. Under SB 18, local governments are required to conduct consultation with California Native American tribes when a General Plan Amendment occurs or if open space is being developed for the first time.

Public Resources Code Section 5097

Public Resources Code Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on non-federal public lands. The disposition of Native American burials fall within the jurisdiction of the NAHC, which prohibits willfully damaging any historical, archaeological, or vertebrate paleontological site or feature on public lands.

Local Regulations

City of San Leandro General Plan

The City of San Leandro General Plan was adopted in 2002 and contains a vision for San Leandro through the year 2015 including policies and actions to help achieve that vision. The Historic Preservation and Community Design Element contains goals and policies to preserve the city's legacy of historic resources, enhance the aesthetic character of the city, and maintain features that make San Leandro unique. The San

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Leandro General Plan defines historic preservation as the “sensitive maintenance, continued use, and restoration of older buildings and sites having historic, architectural, aesthetic, or cultural value.”¹

The Historic Preservation and Community Design Element seeks to establish a preservation program by creating an inventory of structures of historic value within the city. Utilizing the National Register and the Secretary of the Interior’s Standards as a starting point, the General Plan calls for the additional criteria to be considered:²

- “Historic Sites and Structures” include individual buildings or sites determined to have special historic, cultural, educational, archaeological, or aesthetic value.
- “Historic Districts” include geographic areas with large concentrations of historic structures.
- “Neighborhood Conservation Districts (Heritage Neighborhoods)” are areas characterized by older (pre-1940) housing stock, along with historic street furniture, signs, and landscape design elements.

Table 4.4-1 provides a list of the San Leandro General Plan goals and policies related to cultural resources that are applicable to the Project site and future development under the Project:

4.4.1.2 EXISTING CONDITIONS

This section provides an overview of the history of the City of San Leandro and of resources of historical significance that may be affected by the Project.

Paleontological Resources

Paleontological resources (fossils) are the remains and/or traces of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and wood are found in the geologic deposits (rock formations) in which they were originally buried. Paleontological resources represent a limited, non-renewable, sensitive scientific and educational resource. The potential for fossil remains at a location can be predicted through previous correlations established between the fossil occurrence and the geologic formations where they were buried. For this reason, geologic knowledge of a particular area and the paleontological resource sensitivity of particular rock formations, make it possible to predict where fossils will or will not be encountered. However, the San Leandro General Plan EIR does not identify any paleontological resources at the Project site.

Archaeological Resources

Archaeological resources are the physical remnants of prehistoric or historic human activity. These can include human remains and artifacts, including but not limited to tools, portions of building structure or foundation, food, and refuse. The Project site is in the territory that was once controlled by the Ohlone Indians, commonly known as the Costanoans, at the time of the European settlement.

¹ City of San Leandro, *General Plan*, page 7-1.

² City of San Leandro, *General Plan*, page 7-7.

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TABLE 4.4-1 SAN LEANDRO GENERAL PLAN POLICIES PERTAINING TO CULTURAL RESOURCES

Goal/Policy Number	Goal/Policy Text
Land Use	
Policy 11.06	Preserve and enhance the City’s cultural and historic resources, and encourage and acknowledge their contribution to the City’s economic development.
Historic Preservation & Community Design	
Goal 38	Identify, preserve, and maintain San Leandro’s historic resources and recognize these resources as an essential part of the City’s character and heritage.
Policy 38.01	Take a broad and comprehensive approach to historic preservation in San Leandro. Preservation efforts should recognize the City’s cultural history as well as its architectural history, its neighborhoods as well as individual buildings, its natural landscape as well as its built environment, and its archaeology as well as its living history.
Policy 38.02	Recognize the potential for publicly sponsored historic preservation programs and privately initiated historic preservation efforts to enhance San Leandro’s identity as an attractive and distinct community.
Policy 38.03	Develop and maintain programs that recognize and protect historic sites, structures, trees, and other landscape features.
Policy 38.04	Encourage the formation of local historic districts in areas where historic sites and structures are concentrated. Such districts should provide for the preservation, restoration, and public recognition of the resources contained therein.
Policy 38.05	Promote the conservation of historic neighborhoods and the restoration of historic features in such neighborhoods, including structures, street lamps, signage, landscaping, and architectural elements.
Policy 38.06	Update, expand, and maintain inventories of San Leandro’s historic resources, using criteria and survey methods that are consistent with state and federal guidelines.
Policy 38.07	Ensure that new development, alterations, and remodeling projects on or adjacent to historic properties are sensitive to historic resources and are compatible with the surrounding historic context. Ensure that the San Leandro Zoning Ordinance and any future design guidelines include the necessary standards and guidelines to implement this policy.
Policy 38.08	Encourage the relocation of older structures into designated historic districts as an alternative to demolition and an incentive for restoration.
Policy 38.09	Strongly encourage the maintenance and upkeep of historic properties to avoid the need for costly rehabilitation and demolition. Demolition should only be allowed if the City determines that is necessary to protect health, safety, and welfare, and that the structure has no reasonable economic use.
Policy 38.10	Promote the upgrading and restoration of historic structures to meet current seismic safety codes, thereby reducing the potential for damage in an earthquake. Seismic rehabilitation projects should be sympathetic to the architectural character of the structure.
Policy 38.11	In the event that a historic structure is damaged by fire or earthquake to the point where demolition is necessary, encourage the new structure to respect the historic architectural character and form of the building it replaces.
Policy 38.12	Recognize the potential for prehistoric and historic archaeological resources and ensure that future development takes the measures necessary to identify and preserve such resources.
Goal 39	Make protection of historic resources a high City priority, to be implemented through improved record keeping, adequately funded programs, and more effective regulatory measures.
Policy 39.01	Recognize the importance of local historic and cultural resources in the City’s long-range planning activities, including the General Plan, redevelopment project plans, and area or neighborhood plans. Maintain a historic preservation component in the General Plan, with periodic updates to reflect changing conditions, additional listings, and new preservation programs.
Policy 39.02	Ensure that day-to-day planning and building activities, including the issuance of building permits, demolition permits, zoning approvals, site plan approvals, and use permits, are consistent with and further the achievement of local historic preservation goals.
Policy 39.03	Maintain a City Historic Preservation Ordinance that provides for the protection of historic resources within the City of San Leandro.

Source: City of San Leandro General Plan, Chapter 7, Historic Preservation and Community Design Element.

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The Ohlone were hunter gatherers who settled in large, permanent villages, often situated near fresh water sources. Due to the site's proximity to a year-round water source in San Lorenzo Creek, and the presence of well-drained soils, it would have been a likely area for prehistoric people to live or gather resources.³

According to the San Leandro General Plan,⁴ archaeologists and historians have identified at least ten archaeological sites in the city between San Leandro Creek, north of the Project site, and San Lorenzo Creek, south of the Project site. They are not visibly evident, and mostly consist of remnant shell mounds that have been destroyed or covered by development. The Project site is not within nor does it contain any of these sites. Furthermore, Tom Origer and Associates conducted a cultural resources survey of the Project site for the presence of archaeological artifacts, utilizing archival research and on-site fieldwork. No prehistoric or historic-period archaeological resources were discovered within the Project site.⁵

Historical Resources

Local Historical Context

Before the first European settlers arrived, the area now known as San Leandro was home to Native Americans for more than 3,000 years.⁶ As previously mentioned, at least ten archaeological sites have been identified in the city between San Leandro Creek, north of the Project site, and San Lorenzo Creek, south of the Project site, consisting primarily of remnant shell mounds. However, as stated above, a cultural resources survey conducted by Tom Origer & Associates concluded that there were no artifacts found on the Project site itself. Between 1820 and 1842, the area now known as San Leandro was divided through Spanish land grants; most of modern-day San Leandro was contained within the cattle ranches of Ignacio Peralta and Don Jose Joaquin Estudillo.⁷ As settlers, squatters, and "49ers" arrived in the early 1850s, the town was laid out in a grid of streets and became the seat of Alameda County in 1856. A catastrophic earthquake destroyed the County Courthouse in 1868, causing the county seat to be relocated to Oakland. The agricultural town continued to prosper and was incorporated as a City in 1872, reaching 2,300 residents by the turn of the twentieth century. At this time, farms and orchards in the city produced a variety of fruits and vegetables, including cherries, tomatoes, onions, potatoes, asparagus, sugar beets, rhubarb, and apricots.⁸

San Leandro continued to grow at a moderate pace during the first part of the twentieth century and had 14,000 residents by 1940.⁹ Neighborhoods took shape, and railroad corridors running through the city were developed with industry. Downtown was the center of commerce and civic life. It was in the 1940s and 1950s that much of San Leandro's current form and character took shape. Nearly half of the city's current housing stock was added during this era, initially created by the need for wartime housing and

³ Beard, Vicki, 2014, *A Cultural Resources Survey for the San Leandro Shoreline Development Project*, page 3.

⁴ City of San Leandro, *General Plan*, page 7-2.

⁵ Beard, Vicki, 2014, *A Cultural Resources Survey for the San Leandro Shoreline Development Project*, page 7.

⁶ City of San Leandro, *General Plan*, page 2-2.

⁷ City of San Leandro, *General Plan*, page 2-2.

⁸ City of San Leandro, *General Plan*, page 2-2.

⁹ City of San Leandro, *General Plan*, page 2-2.

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sustained by veterans and their families. The city's neighborhood shopping centers and commercial strips along East 14th Street date from this period. The city was among the fastest growing industrial centers in the Bay Area during the post-war years, adding 6,000 manufacturing jobs between 1947 and 1954. By the 1960s, the city's pace of growth reached its natural limit; hills became barriers for expansion and the city's shoreline was acquired for park use and new development shifted to smaller infill sites around the city.

Today, virtually none of the early settlement architectural sites exist. One exception, the Alta Mira Club and original home of Ignacio Peralta, still stands and is a designated California Historical Landmark and has been on the National Register of Historic Places since 1978.¹⁰ Several residential buildings built between 1870 and 1900 are still standing throughout the city, and were built in the vernacular or Victorian style of the time. From the early twentieth century, the Casa Peralta, originally built as a Victorian residence and remodeled as a Moorish villa in 1926, has been on the National Register of Historic Places since 1982.¹¹ Other structures of historic value within the city include distinctive commercial buildings from the early 1900s, such as the Daniel Best Building, and pre-World War II residential buildings characterized by well-maintained California bungalows, Craftsman and Prairie-style homes, and Mediterranean-style cottages.

Federally and State Recognized Historic Resources

The National Register requires that buildings be 50 years or older or prior to eligibility for a listing, while the State OHP has determined that buildings, structures, and objects 45 years or older may be of historical value and therefore eligible for inclusion on the California Register. There are no structures on the Project site that are listed on the National Register of Historic Places. As discussed earlier, two structures in the city are listed on the National Register of Historic Places. The Alta Mira Club is approximately 2.6 miles northeast of the site and Casa Peralta is approximately 2.4 miles from the site.

In general, buildings on the Project site have been constructed in the 1960s or later and are not architecturally distinctive, and are unlikely to meet the eligibility criteria for inclusion on the California Register. However, the Project site includes part of the San Leandro Marina (Mulford Point) that is the former site of oyster beds and is listed as California Historical Landmark #824 (CHL #824). A plaque at the southern end of Mulford Point Drive marks the historical importance of the site part as part of the Bay Area's role in the single most important fishery in the state during the 1890s.¹²

Locally Recognized Historic Resources

The City of San Leandro has developed a list of historic and potentially historic buildings within its jurisdiction, which includes local, State, and federally designated historic properties.¹³ As discussed earlier and demonstrated in the San Leandro General Plan, the former site of San Leandro oyster beds is recognized as CHL #824, and the associated plaque itself as a Historic Landscape Element by the City of San Leandro. The City also has a defined neighborhood called Orchard Street Neighborhood of a historic

¹⁰ City of San Leandro, *General Plan*, page 7-2.

¹¹ City of San Leandro, *General Plan*, page 7-2.

¹² California State Historical Landmarks in Alameda County, http://ceres.ca.gov/geo_area/counties/Alameda/landmarks.html, accessed on June 19, 2014.

¹³ City of San Leandro, *General Plan*, pages 7-8 to 7-9.

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resource as historically sensitive. This neighborhood along with other locally recognized historic resources are mainly located in the central part of the city, a distance of approximately 2.4 miles northeast to the Project site.¹⁴

The Project site contains three monuments that are not directly related to events that occurred within the Project site. One is for California Historic Landmark (CHL) #824, commemorating the oyster beds that lined the shore at the turn of the 20th century. A plaque was erected at this location but has since been stolen. A mosaic of the oyster beds is located at the end of Mulford Point.

There is also a plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel. Maltester served as mayor of San Leandro for 20 years. The United States Congress made the designation in 1986 and the plaque was erected on the south side of Pescador Point in 1987.

The third monument is the Lost Boats Memorial placed by the United States Submarine Veterans of World War II in 1986 and dedicated in 2001. It was placed in memory of the USS Argonaut and the USS Grampus, both submarines lost during World War II. The monument is located near the end of Mulford Point and includes a torpedo and flag poles.

History of the Project Site

A review of historical maps of the Project site indicate that the area was once home to Wick's Landing, a warehouse depicted on the 1859 General Land Office (GLO) plat for the Rancho San Leandro.¹⁵ The building warehoused hay, produce, game, and other goods that were transported across the bay from this location before railroads existed.¹⁶ From 1878 on, the site was known as Mulford Landing. No other buildings or structures are shown within the Project site prior to 1969, when the San Leandro marina first appears on the USGS map.¹⁷

4.4.2 STANDARDS OF SIGNIFICANCE

The Project would result in a significant impact to cultural resources if it would:

1. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to 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.

¹⁴ City of San Leandro, *General Plan*, page 7-5.

¹⁵ Beard, Vicki, 2014, *A Cultural Resources Survey for the San Leandro Shoreline Development Project*, page 6.

¹⁶ Simons, Cynthia, 2008, *Images of America, San Leandro*, Charleston SC: Arcadia Publishing, page 20.

¹⁷ Beard, Vicki, 2014, *A Cultural Resources Survey for the San Leandro Shoreline Development Project*, page 6.

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4.4.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to cultural resources.

CULT-1	The Project would cause a substantial adverse change in the significance of a local historical resource as defined in CEQA Guidelines Section 15064.5.
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As mentioned previously, there are no structures in the Project site listed on the National Register of Historic Places; however, as mentioned above, there are two structures within the city that are listed on the National Register, though both are located at a distance from the Project site where it is unlikely that any impacts are expected to occur to the structures. As stated above, the Casa Peralta is approximately 2.4 miles northeast of the Project site in the central part of the city, and the Alta Mira is approximately 2.6 miles northeast of the Project site.

Buildout of the project would result in the removal of the harbormaster's office, two sets of public restrooms, two existing restaurants, and a foundation from a third building. These buildings were constructed in the 1960s or later and are not architecturally distinctive and would unlikely meet the eligibility criteria for inclusion on the California Register. Given that there are no structures on the Project site listed on the National Register, and the structures on the Project site do not appear to meet the eligibility criteria for inclusion on the California Register, a *less-than-significant* impact would occur.

As described above, the Project site contains three monuments that are not directly related to events that occurred within the Project site, and do not mark specific locations within the Project site. These monuments include the following:

- A mosaic depicting the oyster beds associated with CHL #824.
- A plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel.
- A Lost Boats Memorial placed in memory of USS Argonaut and the USS Grampus.

Construction of the Project may require demolition or relocation of the monuments depending upon their location. Although the three monuments that are not directly related to events that occurred within the Project site, each was placed in honor of historically-important events and are considered locally important historic resources. Demolition or relocation of the monuments would result in a *significant* impact.

Impact CULT-1: The Project would adversely affect locally important on-site monuments.

Mitigation Measure CULT-1: Prior to the issuance of grading permits, the Project Applicant shall preserve or relocate the mosaic depicting the oyster beds associated with CHL #824, the plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel, and the Lost Boats Memorial placed in memory of USS Argonaut and the USS Grampus. Following consultation between the City and Project Applicant with the Office of Historic Preservation regarding the CHL #824 and the United States Submarine Veterans of World War II regarding the Lost Ships Memorial, the City of San Leandro shall provide input regarding the Jack D. Maltester Channel plaque. If

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relocation of the monuments is recommended in order to preserve the monuments, the specific construction techniques shall be identified in order to limit any damage to the monuments.

Significance After Mitigation: Less than significant.

CULT-2	The Project would have the potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
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The Project site is not an identified prehistoric site and because the site has already been significantly disturbed, the likelihood that as-yet-undiscovered archaeological resources are present on-site is low. Policy 38.12 of San Leandro General Plan recognizes the potential for archaeological resources and ensures that new development takes measures necessary to identify and preserve such resources. Although it is unlikely that archaeological resources are located within the Project site, there is still a potential that an archaeological resource could be both discovered and substantially adversely changed (e.g., during project construction, grading or related activities). As a result, a *significant* impact would occur.

Impact CULT-2: The Project would have the potential to cause a significant impact to an archaeological resource pursuant to CEQA Guidelines Section 15064.5.

Mitigation Measure CULT-2: Archeological resources are not known or likely on the Project site. The following measures shall be implemented to avoid inadvertent damage or loss if such resources are discovered during construction. A qualified archeologist shall be on-site to monitor the initial excavation of native soil once all pavement of engineered soil is removed from the Project site. After monitoring the initial excavation, the archeologist shall make recommendations for further monitoring if it is determined that the site has archeological resources. If the archeologist determines that no resources are likely to be found on-site, no additional monitoring shall be required.

If currently unknown historic/prehistoric artifacts or human remains are discovered during ground disturbing activities, the following measures shall be implemented:

- In compliance with State law (Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code), in the event that historical artifacts are found, all work within 50 feet of the find shall stop and a qualified archaeologist shall examine the find. The archaeologist shall then submit a plan for evaluation of the resource to the City of San Leandro Planning Services Division for approval. If the evaluation of the resource concludes that the found resource is eligible for the California Register of Historic Resources, a mitigation plan shall be submitted to the City of San Leandro Planning Services Division for approval, which shall consider reasonable efforts for the resources to be preserved in place or left in an undisturbed state. If the artifacts and samples recovered during construction are determined to be significant and cannot be preserved in place, the artifacts shall be cataloged and curated by a qualified archaeologist and placed in an appropriate curation facility. The mitigation plan shall be completed before earthmoving or construction activities can recommence within the designated resource area.

Significance After Mitigation: Less than significant.

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CULT-3 The Project would have the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The San Leandro General Plan EIR does not identify paleontological resources at the Project site, and the Project site is already highly developed with numerous ground-disturbing activities occurring in the past. However, there could be fossils of potential significance that have not been previously discovered and/or recorded. The San Leandro General Plan does not contain any policies related to paleontological resources that would serve to protect unknown resources associated with the Project. It is possible that that a paleontological resource could be both discovered and substantially adversely changed (e.g., during project construction, grading or related activities). As a result, a *significant* impact would occur.

Impact CULT-3: The Project would have the potential to directly or indirectly affect a unique paleontological resource or site, or unique geologic feature.

Mitigation Measure CULT-3: Paleontological resources are not known or likely on the Project site. The following measures shall be implemented to avoid inadvertent damage or loss if such resources are discovered during construction. In the event that fossils or fossil-bearing deposits are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted. The contractor shall notify a qualified paleontologist to examine the discovery. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards, evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies, such as the Bureau of Land Management (BLM), US Geological Survey (USGS), to determine procedures that would be followed before construction is allowed to resume at the location of the find. If in consultation with the paleontologist, it is determined that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the Project on the qualities that make the resource important. The plan shall be submitted to the City for review and approval and the Project proponent shall implement the approval plan.

Significance After Mitigation: Less than significant.

CULT-4 The Project would have the potential to disturb human remains, including those interred outside of formal cemeteries.

Although no known ethnographic sites have been recorded within the Project site, there could be human remains located within the Project site that are not recorded. It is possible that ground-disturbing construction associated with development of the Project could uncover and adversely affect such remains. As a result, a *significant* impact would occur.

Impact CULT-4: The Project would have the potential to disturb human remains, including those interred outside of formal cemeteries.

Mitigation Measure CULT-4: No human remains are known or likely on the Project site. If human skeletal remains are uncovered during construction, the contractor shall immediately halt work within 50 feet of the find, contact the Alameda County coroner to evaluate the remains, and follow the

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procedures and protocols set forth in Section 15064.5(e)(1) of the CEQA Guidelines. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains (Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 [as amended by AB 2641]). Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery.

Per Public Resources Code 5097.98, the contractor shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the human remains are located, is not damaged or disturbed by further development activity until the contractor has discussed and conferred, as prescribed in this section (California Public Resources Code Section 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the MLD does not make recommendations within 48 hours, the Project Applicant shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the Project Applicant or the descendent may request mediation by the NAHC.

Significance After Mitigation: Less than significant.

4.4.4 CUMULATIVE IMPACTS

CULT-5	The Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant impacts with respect to cultural resources.
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Cumulative 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 neighborhood may not be significant to the character of the neighborhood or streetscape, continued loss of such resources on a project-by-project basis could result in a cumulative significant impact. However, similar to the Project, other projects throughout the City would be required to comply with existing federal, State, and local regulations and policies listed above in the Regulatory Framework. Accordingly, potential cumulative impacts related to cultural resources would be *less than significant*.

As there are no historic structures and no known archaeological resources, paleontological resources, or human remains within the Project site, buildout of the Project would not create, nor contribute to a cumulative impact on cultural resources. Additionally, the existing federal, State, and local regulations and policies described throughout this chapter serve to protect any as-yet-undiscovered cultural resources in the City of San Leandro. Continued compliance with these regulations and implementation of existing policies, including applicable San Leandro General Plan policies, would prevent impacts; therefore, a *less-than-significant* cumulative impact would occur.

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Applicable Regulations:

- California Register of Historic Resources (California Register)
- California Historical Building Code, California Code of Regulations, Title 24, Part 8
- Health and Safety Code Sections 7052 and 7050.5
- Public Resources Code Section 5097
- San Leandro General Plan

Significance Before Mitigation: Less than significant.

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GEOLOGY, SOILS, AND SEISMICITY

4.5 GEOLOGY, SOILS, AND SEISMICITY

This chapter provides an overview of the regulatory framework and existing geologic conditions on the Project site and evaluates potential environmental impacts of the Project related to geology, soils, and seismicity.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 REGULATORY FRAMEWORK

This section summarizes key State and local regulations pertaining to geology, soils, and seismicity that are applicable to the Project. There are no federal regulations relating to geology, soils, and seismicity applicable to the Project.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures used for human occupancy.¹ The main purpose of the Act is to prevent the construction of buildings used for human occupancy on top of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards, such as ground shaking or landslides.²

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around the surface traces of active faults, and to issue appropriate maps.³ The maps are then distributed to all affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. Generally, construction within 50 feet of an active fault zone is prohibited.

San Leandro is listed as a city affected by Alquist-Priolo Earthquake Fault Zones.⁴

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.⁵ Under this Act, seismic hazard zones are mapped by the State Geologist to assist local governments in land use planning. Section 2691(c) of the

¹ Called the *Alquist-Priolo Special Studies Zones Act* until renamed in 1993.

² California Geological Survey, Alquist-Priolo Earthquake Fault Zones, <http://www.consrv.ca.gov/CGS/rghm/ap/Pages/Index.aspx>, accessed on July 17, 2014.

³ Earthquake Fault Zones are regulatory zones around active faults. The zones vary in width, but average about ¼-mile-wide. <http://www.consrv.ca.gov/cgs/rghm/ap/Pages/main.aspx>, accessed on July 17, 2014.

⁴ California Geological Survey, Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of January 2010, <http://www.conservation.ca.gov/cgs/rghm/ap/Pages/affected.aspx>, accessed on July 23, 2014.

⁵ California Geological Survey, Alquist-Priolo Earthquake Fault Zoning Act, <http://www.consrv.ca.gov/cgs/rghm/ap/Pages/main.aspx>, accessed on July 17, 2014.

GEOLOGY, SOILS, AND SEISMICITY

Act states that “it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety.” Section 2697(a) of the Act states that “cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.”

California Building Code

The California Building Code (CBC), known as the California Building Standards Code, is included in Title 24 of the California Code of Regulations. The CBC incorporates the International Building Code, a model building code adopted across the United States.

The CBC is updated every three years, and the current 2013 CBC took effect January 1, 2014. The 2013 CBC has been adopted for use by the City of San Leandro according to Chapter 7 of Title 7 of the San Leandro Municipal Code. Through the CBC, the State provides a minimum standard for building design and construction. The CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

Local Regulations

San Leandro General Plan

The City of San Leandro General Plan contains a goal and policies to minimize the risk of natural hazards, including earthquakes and landslides, in Chapter 6, Environmental Hazards, of the General Plan. The relevant goal and policies are listed in Table 4.5-1.

San Leandro Municipal Code

Chapter 7-12, Grading, Excavations, and Fills

Chapter 7-12, Grading, Excavations, and Fills, of the City of San Leandro Municipal Code maintains a grading ordinance to mitigate hazards associated with erosion and land stability. The ordinance establishes criteria for permits and identifies grading plan submittal and construction requirements.

Clean Water Program

The Alameda County Clean Water Program facilitates local compliance with the Federal Clean Water Act. The City of San Leandro participates in the program. The Program establishes Best Management Practices (BMP's) for erosion control during and after construction. BMP's related to erosion control address preservation of existing vegetation, streambank stabilization, slope drains, and earth dikes and drainage swales, to name a few.

An erosion and sedimentation control plan must be submitted with a grading permit application, along with a drainage plan and pollution control plan. These plans ensure that any runoff from a project site meets regional water quality standards.

GEOLOGY, SOILS, AND SEISMICITY

TABLE 4.5-1 SAN LEANDRO GENERAL PLAN GOAL AND POLICIES

Goal/Policy Number	Goal/Policy Text
Chapter 6, Environmental Hazards	
Goal 29	Mitigation of Natural Hazards: Reduce the potential for injury, property damage, and loss of life resulting from earthquakes, landslides, floods, and other natural disasters.
Policy 29.01	Risk Management: Minimize risks from geologic, seismic, and flood hazards by ensuring the appropriate location, site planning, and design of new development. The City’s development review process, and its engineering and building standards, should ensure that new construction is designed to minimize the potential for damage.
Policy 29.02	Earthquake Retrofits: Strongly encourage the retrofitting of existing structures to withstand earthquake ground shaking, and require retrofitting when such structures are substantially rehabilitated or remodeled.
Policy 29.04	Code Revisions: Revise and update construction codes and regulations to incorporate the latest available information and technology related to earthquake hazards.
Policy 29.05	Public Awareness: Promote greater public awareness of earthquake hazards, along with incentives and assistance to help property owners make their homes and businesses more earthquake-safe.

Source: San Leandro General Plan, 2002, Chapter 6, Environmental Hazards.

4.5.1.2 EXISTING CONDITIONS

Geology and Soils

Regional Geology

The Project site is in the northern portion of the Coast Ranges geomorphic province of California, which is characterized by northwest-trending mountain ranges and valleys that generally parallel the major geologic structures such as the San Andreas and Hayward faults. The oldest widespread rocks in the region are highly deformed sedimentary, metamorphic and volcanic rocks of the Franciscan Assemblage, which formed during the Mesozoic Era (225 to 65 million years ago). These rocks are in fault contact with similar age sedimentary rocks of the Mesozoic Great Valley Sequence. The Mesozoic rocks are, in turn, overlain by a diverse sequence of Cenozoic Era (younger than 65 million years) sedimentary and volcanic rocks. Since their deposition, the Mesozoic and Cenozoic rocks have been extensively deformed by repeated episodes of folding and faulting. The Bay Area experienced several episodes of uplift and faulting during late Tertiary Period (approximately 25 million to 2 million years ago), that produced the region’s characteristic northwest-trending mountain ranges and valleys, which include the eastern San Francisco Bay hills and San Francisco Bay.

Worldwide climate fluctuations during the Pleistocene age (approximately 1.8 million to 11,000 years ago) resulted in several distinct glacial periods. A lowering of sea level accompanied each glacial advance as water became stored in vast ice sheets. Melting of the continental glaciers during warm intervals caused corresponding rises in sea level. High sea levels favored rapid and widespread deposition in the bay and surrounding floodplains. Low sea levels during glacial advances steepened the gradients of streams and rivers draining to the sea, thereby encouraging erosional down-cutting. The most recent glacial interval ended approximately 11,000 years ago. Evidence suggests that during the maximum extent of this latest glaciation, sea level was approximately 300 to 400 feet below its present elevation and the valley now occupied by San Francisco Bay drained to the Pacific Ocean more than 30 miles west of the Golden Gate.

GEOLOGY, SOILS, AND SEISMICITY

Near the beginning of the Holocene age (approximately 11,000 years ago), the rising sea reentered the Golden Gate, and sediments accumulated rapidly beneath the rising San Francisco Bay and on the surrounding floodplains. Being geologically recent, these surface deposits are generally less dense, weaker, and more compressible than the deeper, well-consolidated Pleistocene-age soils that predate the last sea-level rise.

Site Geology

The Project site lies along the eastern margin of San Francisco Bay on the low-lying coastal plain and adjacent filled portions of the bay. An 1878 topographic map of the area, shows that prior to fill placement the original coastline was located east of Monarch Bay Drive as illustrated on Figure 4.5-1.⁶ The entire Project site is relatively low-lying with elevations ranging up to about 10 feet above mean sea level. Roughly, the western two-thirds of the project site, including the existing marina and the surrounding buildings, has been constructed by filling on the shallow margin of San Francisco Bay. Review of historic aerial photographs covering the time period from 1947 to 2012 indicate that some fill was placed periodically during the first half of the twentieth century. By 1947, a low levee had been constructed along the existing coastline. Some small structures were present at Mulford point at that time; however, the site was largely undeveloped. By 1959, the Marina Golf Course in the eastern portion of the site had been constructed. By the early 1960s, the existing marina fill had been placed and development began in the Marina area. By 1968, fill for the Marina Park to the south of the project site had been placed and the park was under construction.

The marina construction included dredging to increase water depth and provide access for boats. Dredging was performed in the marina area and in the channel that leads to San Francisco Bay. Additional dredging has been performed periodically to maintain boating access. Currently there are three maintained channels associated with the Marina: a main access channel leading from San Francisco Bay into the Marina; an auxiliary access channel along the southern side of the southern dike leading to the boat-launching ramp; and, an interior channel leading to the boat berthing area within the marina.

Dredging and filling plans for the marina indicate that the marina fill was constructed by first constructing a series of clamshell dredged dikes (rock dikes were specified at the tips of the western and northern dikes) around the perimeter of the areas to be filled and then filling the interior with either hydraulically placed fill and/or clamshell dredged material.⁷ The fill was placed using both hydraulic and clamshell methods and consists of material derived from Bay Mud and the underlying alluvial sediments.

West of the original coastline, the fill was placed over soft estuarine deposits referred to as Bay Mud. Borings drilled as part of the marina dredging plan development indicate that within the project site the Bay Mud is relatively thin, ranging up to about 10 feet in thickness. The Bay Mud is underlain by older, better consolidated, alluvial and estuarine deposits of Pleistocene and Holocene age.

⁶ Thompson and West, 1878, "Map Number Three, Alameda County Farm Map", Oakland, California.

⁷ Indenco Engineers, 1962, San Leandro Small Craft Harbor Stage II Dredging and Filling Plans, April 9.

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Geotechnical investigations have been conducted for construction of various buildings and other improvements (proposed and existing) on the marina fill dikes.⁸ Borings drilled for these improvements generally encountered 5 to 13 feet of fill underlain by 3 to 16 feet of Bay Mud, which was in turn underlain by older, firmer alluvial, and estuarine deposits.

East of the historic shoreline the project site is underlain by alluvial sediments. These sediments typically consist of interbedded clay and silt with some sand. Little or no Bay Mud is likely to be present in this area.

Liquefaction

Liquefaction is a phenomenon where loose, saturated, non-cohesive soils such as silts, sands, and gravels undergo a sudden loss of strength during earthquake shaking. The test borings performed at the site for previous developments encountered potentially liquefiable sands and silts within the alluvial sediments and in the dredged fill created from the alluvial sediments. These materials are intermixed with clays that would not normally be subject to liquefaction.

Regional Faulting, Seismicity, and Seismic Hazards

Regional Faulting and Seismicity

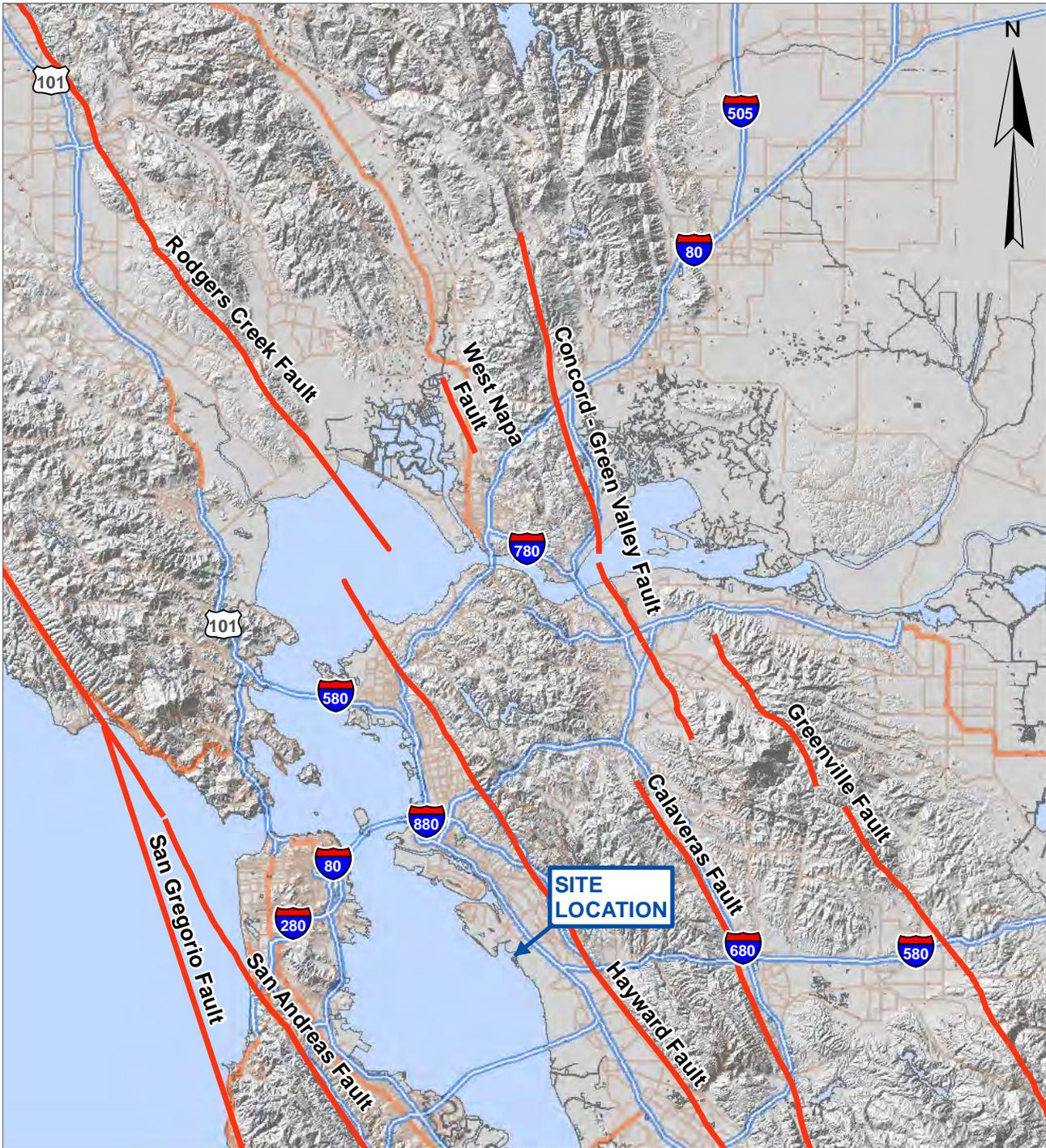
Seismic activity within the Coast Ranges is generally associated with active faults of the San Andreas system, which includes major active faults both east and west of the site, as shown in Figure 4.5-2. Over the width of the San Francisco Bay Region, approximately 1.5 inches/year of relative horizontal movement occurs between the North American and Pacific Plates⁹. This movement is partially accommodated by creep and earthquakes occurring along active faults. The approximate distances and directions to major active Bay Area faults are summarized in Table 4.5-2.

As indicated in the above table, the active fault nearest the site is the Hayward fault, which is located approximately 3.8 miles northeast of the east end of Project site. The Hayward fault is a northwest-trending zone approximately 51 miles long, which extends from southeastern San Jose, through the East Bay communities, into San Pablo Bay. Beneath San Pablo Bay, faulting generally steps right (east) to the Rodgers Creek fault. To the south, the Hayward fault merges with the Calaveras fault.

Although the City of San Leandro is listed as an area affected by the Alquist-Priolo Fault Zones, the Project site is not in one of the Alquist-Priolo Earthquake Fault Zones. The closest such zone is along the Hayward Fault approximately 3.8 miles northeast of the Project site.

⁸ Harding Lawson Associates, 1977, Geotechnical Investigation For Horatio's Restaurant; Gribaldo Jones & Associates, 1969, Geotechnical Investigation For Tia Maria Restaurant; Woodward, Clyde, Sherard & Associates, 1965 & 1972, Geotechnical Investigations for Marina (Blue Dolphin) Restaurant; Earth Systems Consultants, 1984, Geotechnical Investigation For Launch Ramp Restaurant, Geotechnical Investigation for Marina Launch Ramp, Treadwell and Rollo, 2005.

⁹ Working Group on California Earthquake Probabilities (WGCEP), 2008, "The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2): 2007 – 2036. U. S. Geological Survey Open File Report 2007-1437.



Source: Alan Kropp & Associates.

 "Active" Regional Faults (Surface Displacement within the Last 11,000 years)



Sources: 1) The California Geological Survey, 2001, CD's 2001-04, 2001-05, and 2001-06: GIS Files of Official Alquist-Priolo Earthquake Fault Zones (http://www.consrv.ca.gov/CGS/geologic_hazards/regulatory_hazard_zones/ap_cd_html.htm).
2) Jennings, 2010, "Fault Activity Map of California and Adjacent Areas," CDMG, Geologic Data Map No. 6.
3) California Division of Mines and Geology, 1997, "Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada."
4) Background data: USGS 10m DEM.

Figure 4.5-2
Regional Fault Map

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TABLE 4.5-2 APPROXIMATE ACTIVE FAULT DISTANCES AND DIRECTIONS

Active Fault	Approximate Distance from Project Site (Miles)	Approximate Direction from Project Site
Hayward	3.8	Northeast
Calaveras	12.0	Northeast
San Andreas	14.5	Southwest
Concord-Green Valley	19.0	North-Northeast
San Gregorio	22.0	Southwest
Rodgers Creek	30.0	North-Northwest

Source: Allan Kropp & Associates, 2014.

Several large earthquakes have occurred throughout the region during historic times. These included several earthquakes on the Hayward fault as well as earthquakes on the San Andreas and Calaveras faults. Commonly, historic earthquakes are characterized in terms of Local Magnitude (M_L), which has also come to be known as Richter Magnitude (M). A brief summary of information on historic earthquakes in the area is given below.

Three earthquakes larger than M 6.0 are thought to have occurred on the Hayward fault during historical time.¹⁰ On October 21, 1868, an earthquake of approximately M 6.8 occurred on the southern segment of the Hayward fault. This earthquake reportedly produced surface ground rupture from Oakland to the Warm Springs district of Fremont, a length of approximately 30 miles. The other two earthquakes occurred in 1858 (M 6.1) and 1911 (M 6.6). Both of these earthquakes were also centered in the southern portion of the Hayward fault.¹¹

The largest historical earthquake in the Bay Area occurred on the San Andreas fault near San Francisco in 1906. That earthquake, of M 8.3, caused widespread damage throughout the region. More recent earthquakes in the region include the October 17, 1989, Loma Prieta earthquake on the San Andreas fault (M 7.1); the Hollister, Coyote Lake, and Morgan Hill earthquakes of 1974, 1979, and 1984, on the Calaveras fault, (M 5.2, M 5.9, and M 6.2, respectively); the 1957 Daly City earthquake on the San Andreas fault (M 5.3); two Santa Rosa earthquakes of 1969 on the Rodgers Creek fault (M 5.6 and M 5.7); and the South Napa earthquake in August 2014 (M 6.0).

¹⁰ Topozada, Tousson R., and David L. Parke, 1982. Area Damaged by the 1868 Hayward Earthquake and Recurrence of Damaging Earthquakes near Hayward, California Department of Conservation, Division of Mines and Geology Special Publication 62.

¹¹ Topozada, Tousson R., Charles R. Real, and David L. Parke, 1981. Preparation of Iseismal Maps and Summaries of Reported Effects for Pre-1900 California Earthquakes: California Department of Conservation, Division of Mines and Geology Open-File Report 81-11.

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The most recent significant earthquake in the area was the Loma Pieta earthquake of October 17, 1989. This earthquake had a magnitude of 7.1 and was centered approximately 49 miles southeast of San Leandro. Strong ground shaking occurred in the San Leandro area and property damage in the area was light to moderate.

In 2008, The Working Group on California Earthquake Probabilities (WGCEP), in conjunction with the United States Geological Survey (USGS), published an updated report evaluating the probabilities of significant earthquakes occurring in the Bay Area over the next three decades.¹² The WGCEP report indicates that there is a 0.63 (63 percent) probability that at least one magnitude 6.7 or greater earthquake will occur in the San Francisco Bay region before 2036. This probability is an aggregate value that considers seven principal Bay Area fault systems and unknown faults (background values). The findings of the WGCEP report are summarized in Table 4.5-3.

TABLE 4.5-3 EARTHQUAKE PROBABILITY

Fault System	Probability of at Least One Magnitude 6.7 or Greater Earthquake in 2007-2036
Hayward – Rodgers Creek	0.31
Calaveras	0.07
San Andreas	0.21
Concord-Green Valley	0.03
San Gregorio	0.06
Greenville	0.03
Mount Diablo Thrust	0.01
Background	0.14

Source: Working Group on California Earthquake Probabilities (WGCEP), 2008, The Uniform California Rupture Forecast, Version 2 (UCERF 2): 2007-2036. U.S. Geological Survey Open File Report 2007-1437.

The WGCEP report indicates that between 2007 and 2036 there is a 14 percent chance that an earthquake with a magnitude of greater than 6.7 may occur in the Bay Area on a fault system not characterized in the study.

4.5.2 STANDARDS OF SIGNIFICANCE

The Project would result in a significant geology, soils, and seismicity impact if it would:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

¹² Working Group on California Earthquake Probabilities (WGCEP), 2008. "The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2): 2007 – 2036. U. S. Geological Survey Open File Report 2007-1437.

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- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.
 - Strong seismic ground shaking.
 - Seismic-related ground failure, including liquefaction.
 - Landslides.
2. Result in substantial soil erosion or the loss of topsoil.
 3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
 4. Be located on expansive soil, as defined in Table 18-1-b of the Uniform Building Code (1994), creating substantial risks to life or property.
 5. 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.

4.5.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to geology and soils.

GEO-1	The Project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking; seismic-related ground failure; including liquefaction and lateral spreading.
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Large earthquakes could generate strong to violent ground shaking at the Project site and could cause damage to structures and threaten public safety. San Leandro lies within a seismically active region that includes much of western California. Several active faults are present in the region, including the Hayward, Calaveras, and San Andreas faults. These faults are capable of generating large earthquakes that could produce strong to violent ground shaking at the Project site. WGCEP has estimated that there is a 63 percent chance of a large earthquake (magnitude 7 or greater) in the Bay Area by the year 2036.¹³ At present, it is not possible to predict precisely when or where earthquakes will occur on these faults.

During an earthquake, seismic risk to a structure would depend on the distance to the earthquake epicenter, the characteristics of the earthquake, the subsurface conditions underlying the structure and its immediate vicinity, and the characteristics of the structure. The Project site is located on relatively thick, alluvial deposits that could cause amplification of ground shaking. In addition, a thin layer of soft Bay Mud overlies the alluvium in the western portion of the Project site and could increase the shaking

¹³ Working Group on California Earthquake Probabilities (WGCEP), 2008. "The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2): for 2007-2036," U.S. Geological Survey Open File Report 2007-1437; CGS Special Report 203; and SCEC Contribution #1138..

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amplification. This is considered a *significant* impact. Impacts and related mitigations for potential liquefaction hazards are addressed in Impact GEO-3.

The Project site is flat; there is no potential for landslide impacts.

Impact GEO-1: The Project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking, seismic-related ground failure, including liquefaction and lateral spreading.

Mitigation Measure GEO-1: Require geotechnical reports for all development within the Project site, as required by the San Leandro Municipal Code Section 7-12. The geotechnical reports shall consider the potential earthquake related impacts of strong ground shaking amplification due to the soft underlying sediments, as identified in this DEIR. Seismic ground motion parameters shall be provided in the geotechnical reports in accordance with CBC requirements. The building plans shall incorporate all design and construction criteria specified in the report(s). The geotechnical engineer shall sign the improvement plans and approve them as conforming to their recommendations prior to issuance of building permits. The geotechnical engineer shall also assume responsibility for inspection of the work and shall certify to the City, prior to acceptance of the work that the work performed is adequate and complies with its recommendations. The geotechnical engineer of record shall prepare letters and as-built documents to document their observances during construction and to document that the work performed is in accordance with the project plans and specifications. As required by the City of San Leandro, all construction activities shall meet the CBC regulations for seismic safety (i.e. reinforcing perimeter and/or load bearing walls, bracing parapets, etc.).¹⁴ In addition, all project-related grading, trenching, backfilling and compaction operations shall be conducted in accordance with the City of San Leandro Engineering Department's Standard Plans. All improvements shall conform to regulations for seismic safety contained in the CBC.

Significance After Mitigation: Less than significant.

GEO-2 The Project could result in substantial soil erosion or the loss of topsoil.

Soil Erosion or Loss of Topsoil

Proper drainage and control of runoff is important in controlling erosion and flooding both during and after construction. Surface drainage ditches and storm drains must be regularly maintained to continue functioning as designed. In addition, proper drainage and erosion control during grading is necessary to

¹⁴ Seismic design provisions of the CBC generally prescribe minimum lateral forces, applied statistically to the structure and combined with the gravity forces of dead and live loads. The CBC-prescribed lateral forces generally are substantially smaller than the expected peak forces that would be associated with a major earthquake. Therefore, when built according to CBC standards, structures are anticipated to (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some nonstructural damage; and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance to the current building code standards does not guarantee that significant structural damage will not occur in the event of a maximum magnitude earthquake; but it is reasonable to expect that a well-designed and well-constructed structure would not collapse or cause loss of life in a major earthquake.

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control erosion. Typically, erosion impacts are greatest in the first two years after construction, the time generally required to reestablish a good vegetation cover on areas of disturbed soil.

Coastal Erosion

The San Leandro shoreline is exposed to wave attack. The coastline within the vicinity of the Project site is armored with rip-rap to control erosion. No areas of significant coastal erosion were observed within the Project site. The existing erosion protection may require periodic maintenance to maintain effective erosion control.

Impact GEO-2: The Project could result in substantial soil erosion or the loss of topsoil.

Mitigation Measure GEO-2A: The Project civil engineer shall prepare an erosion control plan. The erosion control plan shall be submitted to the City as a part of building and/or grading plan submittal. The erosion control plan shall conform to the guidelines of the Clean Water Program and Utilize BMP's detailed under section "C6 CASQA - BMPs Erosion Control" of the Program Resources.

Mitigation Measure GEO-2B: The existing rip-rap providing coastal erosion protection shall be periodically refurbished to maintain effective erosion control. This may include local replacement of rip-rap boulders as well as periodic re-building of rip-rap armament sections degraded by wave attack and/or long-term erosion.

Significance After Mitigation: Less than significant.

GEO-3	The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading, subsidence, liquefaction, or collapse.
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Liquefaction

Given the Project site is located in a seismically active region, future earthquakes are likely during the life of the Project and the risk of liquefaction could be significant.

Potential liquefaction at the Project site would likely be settlement of the ground surface and the localized expulsion of sand and water onto the ground surface (i.e., sand boils). Liquefaction could also result in excessive settlement of improperly designed foundations and possibly lateral spreading (the lateral spreading hazard to be discussed in subsequent section). Depending on the amount of ground or foundation settlement, damage to the planned buildings could be moderate. Other areas such as parking lots and landscape areas could also undergo settlement and ground deformation as a result of liquefaction. This is considered to be a *significant* impact.

Impact GEO-3A: The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading, subsidence, liquefaction, or collapse.

Mitigation Measure GEO-3A: Project-specific geotechnical reports shall be prepared in accordance with the City's grading permit regulations. The recommendations for both special foundations and

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other geotechnical engineering measures specified in project specific geotechnical reports shall be implemented during design and construction. These measures include use of deep foundations engineering and removal or improvement of potentially liquefiable soils. Documentation of the methods used shall be provided in the required design-level geotechnical report(s).

Significance After Mitigation: Less than significant.

Lateral Spreading

Lateral spreading is a phenomenon in which relatively flat land areas undergo sudden lateral movement generally toward a slope or channel margin during an earthquake. Lateral spreading occurs most frequently where there is laterally continuous liquefiable layer or layers present extending to or near a slope. Within the Project site lateral spreading could be a risk along the channel margins created by the dredged channels both inside and outside of the marina and adjacent fill dikes. This is considered to be a *significant* impact.

Impact GEO-3B: The Project could result in a significant impact related to development on unstable geologic units and soils or result in lateral spreading.

Mitigation Measure GEO-3B: The potential for lateral spreading shall be evaluated as a part of the required geotechnical reports. Where necessary, corrective measures shall be included in the required design-level geotechnical report(s) and implemented during construction. These measures could include retaining structures to stabilize channel margins, use of deep foundations, removal or improvement of liquefiable soils, and/or the use of relatively rigid foundations.

Significance After Mitigation: Less than significant.

Settlement (Subsidence, Collapse)

Settlement, also referred to as subsidence and/or collapse, is a process in which compressible soils undergo a reduction in volume in response to an increase in pressure. This pressure can be the result of the addition of soil material or structures. Soils most susceptible to settlement are soft, saturated clays and silts such as the Bay Mud dredged fill materials that underlies the area west of the original shoreline. The existing fills were placed more than 50 years ago by placing soil and rock material over the underlying Bay Mud. Since that time the Bay Mud and fill has consolidated under the load exerted by the existing fills and it is likely that the potential for additional settlement under existing conditions is low. However, the Project would include construction of new structures, which would place a load on their foundations and the underlying materials as well as potentially the placement of some new fill. For buildings constructed with shallow foundations such as slabs or spread footings, the new load would be applied directly to the existing fill materials. Larger buildings would likely be constructed using deep foundations such as driven piles, which apply the load to the alluvial materials beneath the Bay Mud, which are firmer and less prone to settlement. If not properly engineered, buildings could undergo excessive settlement. Parking areas, underground utilities and/or other non-building improvements could also be impacted by new fill placement. This is considered to be a *significant* impact.

Impact GEO-3C: The Project could result in a significant impact related to development on unstable geologic units and soils or result in subsidence or collapse.

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Mitigation Measure GEO-3C: Settlement of the existing fill and Bay Mud could have adverse effects on shallow foundations, underground utilities, pavements, and other improvements. Options to mitigate these effects include use of shallow ridged foundations for smaller structures, supporting larger structures with deep foundations such as driven piles, and installing flexible connections for utilities. Pre-loading consolidation (surcharging) prior to construction of new improvements could also be considered. The recommendations for both special foundations and other geotechnical engineering measures specified in project specific geotechnical reports shall be implemented during design and construction.

Significance After Mitigation: Less than significant.

GEO-4 **The Project could create substantial risks to property as a result of its location on expansive soil, as defined by Section 1803.5.3 of the California Building Code.**

Expansive Soils

The fill and native soils that cover the Project site east of the historic shoreline are moderately to highly expansive. Expansive soils undergo a significant volume change as a result of wetting or drying. This volume change could cause damage to improperly designed foundations and pavements. Where buildings are constructed in areas containing expansive soils this impact can be effectively mitigated through use of appropriate foundations, by capping expansive soils with a layer of non-expansive fill, or by lime treatment. Typical mitigation measures for pavements include special pavement design, lime treatment of subgrade soils and/or sub-excavation of expansive soils and replacement with non-expansive fill. This is considered to be a *significant* impact.

Impact GEO-4: The Project could create substantial risks to property as a result of its location on expansive soil, as defined by Section 1803.5.3 of the California Building Code.

Mitigation Measure GEO-4: The Project geotechnical engineer shall make specific recommendations for mitigation of expansive soils under pavements and structures, including techniques such as capping expansive soils with a layer of non-expansive fill, or by lime treatment. Typical mitigation measures for pavements could include special pavement design, lime treatment of subgrade soils and/or sub-excavation of expansive soils and replacement with non-expansive fill. These recommendations shall be based on testing of the in-site fill materials. The recommendations shall be submitted to the City as a part of building and/or paving plan submittal.

Significance After Mitigation: Less than significant.

GEO-5 **The 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.**

Development at the Project site would not require the use of septic tanks or alternative wastewater disposal systems. Wastewater will be discharged into the existing public sanitary sewer system, which is

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serviced by the City of San Leandro, that provides wastewater collection and treatment services to the City's residents. Wastewater is eventually conveyed to the City's Water Pollution Control Plant located at 3000 Davis Street, San Leandro. As such, there would be *no impact* from implementation of the Project where soils might otherwise not be capable of supporting the use of septic tanks or alternative wastewater disposal systems.

Significance Before Mitigation: No impact.

4.5.4 CUMULATIVE IMPACTS

GEO-6 The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology and soils.

The following cumulative analysis considers the Project site in the context of the City of San Leandro as well as other past, present, and foreseeable projects in the vicinity. The City of San Leandro is largely built out. However, as remaining development proceeds within the City, the number of structures that may be subject to risks from geologic and seismic hazards is likely to increase. All new development in the City of San Leandro would be subject to CBC requirements, as well as the requirements embedded in the City's building permit process (e.g., requirement for geotechnical reports prior to grading permit, as required by Municipal Code Section 7-12). Compliance with CBC requirements, and the requirements of the Clean Water Program for erosion-control BMPs, along with compliance with the City's Municipal Code Chapter 7-12, as described in the Regulatory Framework of this draft EIR, would result in a *less than significant* cumulative impacts associated with soil erosion, loss of topsoil, and development-related impacts that pertain to seismically induced ground-shaking, liquefaction, and expansive soils.

Given the distance of known active faults from the Project site, the risk of primary fault rupture is judged to be low. Although the Project could be located on an unstable geologic unit(s) its development would not contribute to an associated cumulative impact given the site-specific nature of impacts related to geology and soils. The cumulative impacts associated with implementation of the Project, together with other past, present, and reasonably foreseeable projects in the surrounding area, would therefore result in a *less-than-significant* cumulative impact with respect to geology and soils.

Applicable Regulations:

- San Leandro General Plan
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.

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GREENHOUSE GAS EMISSIONS

4.6 GREENHOUSE GAS EMISSIONS

This chapter evaluates the potential for land use changes associated with adopting and implementing the San Leandro Shoreline Development (Project) to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough individually to result in a measurable increase in global concentrations of GHG emissions, global warming impacts of a project are considered on a cumulative basis. This chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review, based on preliminary information available. Transportation sector emissions are based on trip generation provided by Kittelson & Associates, Inc. GHG emissions modeling is included in Appendix D, *Air Quality and Greenhouse Gas Modeling*, of this Draft EIR.

4.6.1 ENVIRONMENTAL SETTING

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, carbon dioxide (CO₂), methane (CH₄), and ozone (O₃)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).^{1,2,3} The major GHGs are briefly described below.

- **Carbon dioxide (CO₂)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration. It can also enter as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH₄)** is emitted during the production and transportation of coal, natural gas, and oil. Methane emissions also result from livestock, other agricultural practices, and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N₂O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

¹ Water vapor (H₂O) 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. 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 (CARB, 2014). 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*, New York: Cambridge University Press.

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- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.
 - **Chlorofluorocarbons (CFCs)** are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down the ozone layer. These gases are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.
 - **Perfluorocarbons (PFCs)** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF₄] and perfluoroethane [C₂F₆]) were introduced as alternatives, along with HFCs, to ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high GWP.
 - **Sulfur Hexafluoride (SF₆)** is a colorless gas soluble in alcohol and ether, and slightly soluble in water. SF₆ is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.
 - **Hydrochlorofluorocarbons (HCFCs)** contain hydrogen, fluorine, chlorine, and carbon atoms. Although they are ozone-depleting substances, they are less potent than CFCs. They have been introduced as temporary replacements for CFCs.
 - **Hydrofluorocarbons (HFCs)** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs.^{4,5}

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 4.6-1. The GWP is used to convert GHGs to CO₂-equivalence (CO₂e) 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 Second Assessment Report GWP values for CH₄, a project that generates 10 metric tons (MT) of CH₄ would be equivalent to 210 MT of CO₂.⁶

⁴ United States Environmental Protection Agency, 2012. Greenhouse Gas Emissions, <http://www.epa.gov/climatechange/ghgemissions/gases.html>.

⁵ Intergovernmental Panel on Climate Change, 2001. *Third Assessment Report: Climate Change 2001*, New York: Cambridge University Press.

⁶ CO₂-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.

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TABLE 4.6-1 GHG EMISSIONS AND THEIR RELATIVE GLOBAL WARMING POTENTIAL COMPARED TO CO₂

GHGs	Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO ₂ ^a	Fourth Assessment Report Global Warming Potential Relative to CO ₂ ^b
Carbon Dioxide (CO ₂)	50 to 200	1	1
Methane (CH ₄) ^c	12 (±3)	21	25
Nitrous Oxide (N ₂ O)	120	310	298
Hydrofluorocarbons:			
HFC-23	264	11,700	14,800
HFC-32	5.6	650	675
HFC-125	32.6	2,800	3,500
HFC-134a	14.6	1,300	1,430
HFC-143a	48.3	3,800	4,470
HFC-152a	1.5	140	124
HFC-227ea	36.5	2,900	3,220
HFC-236fa	209	6,300	9,810
HFC-4310mee	17.1	1,300	1,030
Perfluoromethane: CF ₄	50,000	6,500	7,390
Perfluoroethane: C ₂ F ₆	10,000	9,200	12,200
Perfluorobutane: C ₄ F ₁₀	2,600	7,000	8,860
Perfluoro-2-methylpentane: C ₆ F ₁₄	3,200	7,400	9,300
Sulfur Hexafluoride (SF ₆)	3,200	23,900	22,800

Notes: The IPCC has published updated global warming potential (GWP) values in its Fifth Assessment Report (2013) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO₂ (radiative forcing is the difference of energy from sunlight received by the earth and radiated back into space). However, GWP values identified in the Second Assessment Report are still used by BAAQMD to maintain consistency in GHG emissions modeling. In addition, the 2008 Scoping Plan was based on the GWP values in the Second Assessment Report.

a. Based on 100-Year Time Horizon of the GWP of the air pollutant relative to CO₂. Intergovernmental Panel on Climate Change. 2001. Third Assessment Report: Climate Change 2001. New York: Cambridge University Press.

b. Based on 100-Year Time Horizon of the GWP of the air pollutant relative to CO₂. Intergovernmental Panel on Climate Change. 2007. Fourth Assessment Report: Climate Change 2007. New York: Cambridge University Press.

c. 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 CO₂ is not included.

Sources: Intergovernmental Panel on Climate Change, 2001, Third Assessment Report: Climate Change 2001, New York: Cambridge University Press; and Intergovernmental Panel on Climate Change, 2007, Fourth Assessment Report: Climate Change 2007, New York: Cambridge University Press.

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California's Greenhouse Gas Sources and Relative Contribution

California is the tenth largest GHG emitter in the world and the second largest emitter of GHG in the United States, surpassed only by Texas; however, California also has over 12 million more people than the state of Texas.⁷ Because of more stringent air emission regulations, in 2001 California ranked fourth lowest in carbon emissions per capita and fifth lowest among states in CO₂ emissions from fossil fuel consumption per unit of Gross State Product (total economic output of goods and services).⁸

The California Air Resources Board (CARB) last update to the statewide GHG emissions inventory that used the Second Assessment Report GWPs was conducted in 2012 for year 2009 emissions.⁹ California's transportation sector is the single largest generator of GHG emissions, producing 37.9 percent of the State's total emissions. Electricity consumption is the second largest source, producing 22.7 percent. Industrial activities are California's third largest source of GHG emissions at 17.8 percent.^{10,11}

In 2013, the statewide GHG emissions inventory was updated for 2000 to 2012 emissions using the GWPs in IPCC's Fourth Assessment Report. Based on these GWPs, California produced 459 MMT CO₂e GHG emissions in 2012. California's transportation sector remains the single largest generator of GHG emissions, producing 36.5 percent of the State's total emissions. Electricity consumption made up 20.7 percent, and industrial activities produced 19.4 percent. Other major sectors of GHG emissions include commercial and residential, recycling and waste, high global warming potential GHGs, agriculture, and forestry.¹²

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 20th century, however, scientists observed a rapid change in the climate and climate change pollutants that is attributable to human activities. The amount of CO₂ has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million (ppm) per year since 1960, mainly due to combustion of fossil fuels and deforestation.¹³ These recent changes in climate change pollutants far exceed the extremes of the ice

⁷ California Energy Commission, 2005. Climate Change Emissions Estimates from Bemis, Gerry and Jennifer Allen, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2002 Update, California Energy Commission Staff Paper CEC-600-2005-025, Sacramento, California, June.

⁸ California Energy Commission, 2006. *Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004*, Report CEC-600-2006-013-SF, December.

⁹ Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (AB 32) (2006).

¹⁰ CO₂-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.

¹¹ California Air Resources Board, 2012. *California Greenhouse Gas Inventory for 2000–2009: By Category as Defined by the Scoping Plan*, April.

¹² California Air Resources Board, 2014. *California Greenhouse Gas Inventory for 2000–2009: By Category as Defined by the Scoping Plan*, March 24.

¹³ Intergovernmental Panel on Climate Change, 2007. *Fourth Assessment Report: Climate Change 2007*, New York: Cambridge University Press.

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ages, and the global mean temperature is rising at a rate that cannot be explained by natural causes alone.¹⁴ Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants.¹⁵

Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historic trends in emissions as well as observations on the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, climate trends include varying degrees of certainty on the magnitude of the direction 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;
- areas affected by drought increases;
- intense tropical cyclone activity increases; and
- increased incidence of extreme high sea level (excludes tsunamis).

IPCC's "2007 IPCC Fourth Assessment Report" projects that the global mean temperature increase from 1990 to 2100 under different climate-change scenarios will range from 1.4 to 5.8 degrees Celsius (2.5 to 10.4 degrees Fahrenheit). 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.¹⁶

Potential Climate Change Impacts for California

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 also hard to predict. 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) 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.¹⁷ According to the California Climate Action Team—a committee of State agency secretaries and the heads of agency, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate

¹⁴ At the end of the last ice age, the concentration of CO₂ increased by around 100 ppm (parts per million) over about 8,000 years, or approximately 1.25 ppm per century. Since the start of the industrial revolution, the rate of increase has accelerated markedly. The rate of CO₂ accumulation currently stands at around 150 ppm/century—more than 200 times faster than the background rate for the past 15,000 years.

¹⁵ California Climate Action Team, 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March.

¹⁶ Intergovernmental Panel on Climate Change, 2007. *Fourth Assessment Report: Climate Change 2007*, New York: Cambridge University Press.

¹⁷ California Climate Action Team, 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March.

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change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 4.6-1), and the inertia of the Earth's climate system could produce as much as 0.6 degrees Celsius (1.1 degrees Fahrenheit) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 4.6-2 and include public health impacts, water resources impacts, agricultural impacts, coastal sea level impacts, forest and biological resource impacts, and energy impacts. Specific climate change impacts that could affect San Leandro include health impacts from deterioration of air quality, water resources impacts from a reduction in water supply, increased energy demand, and sea level rise (see also Chapter 4.8, *Hydrology and Water Quality*, for flood impacts).

4.6.1.1 REGULATORY FRAMEWORK

This section describes the federal, State and local regulations applicable to GHG emissions.

Federal Regulations

The United States Environmental Protection Agency (EPA) announced on December 7, 2009 that GHG emissions threaten the public health and welfare of the American people and GHG emissions from on-road vehicles contribute to the threat. The EPA's endangerment findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not in and of themselves impose any emission reduction requirements, but allowed the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.¹⁸

The EPA's endangerment finding covers emissions of six key GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the Project because they constitute the majority of GHG emissions from the onsite land uses, and per BAAQMD guidance are the GHG emissions that should be evaluated as part of a GHG emissions inventory.

US Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 metric tons (MT) or more of CO₂ per year are required to submit an annual report.

¹⁸ United States Environmental Protection Agency (EPA), 2009. *Greenhouse Gases Threaten Public Health and the Environment*. Science overwhelmingly shows GHG concentrations at unprecedented levels due to human activity, December, <http://yosemite.epa.gov/opa/admpress.nsf/0/08D11A451131BCA585257685005BF252>. In 2007, the Supreme Court ruled that GHGs are pollutants under the Clean Air Act in *Massachusetts v. EPA*, 549 U.S. 497 (2007).

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TABLE 4.6-2 SUMMARY OF GHG EMISSIONS RISKS TO CALIFORNIA

Impact Category	Potential Risk
Public Health Impacts	Poor air quality made worse More severe heat
Water Resources 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 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
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: California Energy Commission, 2006, Our Changing Climate: Assessing the Risks to California, 2006 Biennial Report, California Climate Change Center, CEC-500-2006-077; California Energy Commission, 2008, The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California, CEC-500-2008-0077.

Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon [mpg] by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be considered to be in compliance with State requirements. The federal government issued new standards in 2012 for model years 2017–2025, which will require a fleet average of 54.5 mpg in 2025.

EPA Regulation of Stationary Sources Under the Clean Air Act (Ongoing)

Pursuant to its authority under the CAA, the EPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to the President’s 2013 Climate Action Plan, the EPA will be directed to also develop regulations for existing stationary sources.

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State Regulations

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05, Assembly Bill 32 (AB 32), and Senate Bill 375 (SB 375).

Executive Order S-03-05

Executive Order S-3-05, signed June 1, 2005, 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, the Global Warming Solutions Act (2006)

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in AB 32, the Global Warming Solutions Act. AB 32 was passed by the California State legislature on August 31, 2006, to place the State on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The final Scoping Plan was adopted by CARB on December 11, 2008. AB 32 directed CARB to adopt discrete early action measures to reduce GHG emissions and outline additional reduction measures to meet the 2020 target. In order 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 MT of CO₂e 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.

The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be approximately 596 MMT CO₂e in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 MMT CO₂e (471 million tons) for the State. The 2020 target requires a total emissions reduction of 169 MMT CO₂e, 28.5 percent from the projected emissions of the business-as-usual (BAU) scenario for the year 2020 (i.e., 28.5 percent of 596 MMT CO₂e).^{19, 20}

Since release of the 2008 Scoping Plan, CARB has updated the Statewide GHG emissions inventory to reflect GHG emissions in light of the economic downturn and of measures not previously considered in the 2008 Scoping Plan baseline inventory. The updated forecast predicts emissions to be 545 MMT CO₂e by 2020. The revised BAU 2020 forecast shows that the State would have to reduce GHG emissions by 21.7 percent from BAU. The new inventory also identifies that if the updated 2020 forecast includes the

¹⁹ California Air Resources Board, 2008, Climate Change Scoping Plan: A Framework for Change.

²⁰ CARB defines BAU in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

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reductions assumed from implementation of Pavley (26 MMT CO₂e of reductions) and the 33 percent RPS (12 MMT CO₂e of reductions) the forecast would be 507 MMT CO₂e in 2020, and then an estimated 80 MMT CO₂e of additional reductions are necessary to achieve the statewide emissions reduction of AB 32 by 2020, or 15.7 percent of the projected emissions compared to BAU in year 2020 (i.e., 15.7 percent of 507 MMT CO₂e).²¹

Key elements of CARB's GHG reduction plan that may be applicable to the Project include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance efficiency standards (adopted and cycle updates in progress);
- Achieving a mix of 33 percent for energy generation from renewable sources (anticipated by 2020);
- A California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system for large stationary sources (adopted 2011);
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several Sustainable Communities Strategies have been adopted);
- Adopting and implementing measures pursuant to State laws and policies, including California's clean car standards (amendments to the Pavley Standards adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (LCFS) (adopted 2009).
- Creating target fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation (in progress).

Table 4.6-3 shows the anticipated reductions from regulations and programs outlined in the 2008 Scoping Plan. Although local government operations were not accounted for in achieving the 2020 emissions reduction, CARB estimates that land use changes implemented by local governments that integrate jobs, housing, and services result in a reduction of 5 MMT CO₂e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments play in the successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2014 levels by 2020 to ensure that municipal and community-wide emissions match the State's reduction target.²² Measures that local governments take to support shifts in land use patterns are anticipated to emphasize compact, low-impact growth over development in greenfields, resulting in fewer Vehicle Miles Travelled (VMT).²³

²¹ California Air Resources Board, 2012. *Status of Scoping Plan Recommended Measures*, http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf.

²² The Scoping Plan references a goal for local governments to reduce community GHG emissions by 15 percent from current (interpreted as 2008) levels by 2020, but it does not rely on local GHG reduction targets established by local governments to meet the State's GHG reduction target of AB 32.

²³ California Air Resources Board, 2008. *Climate Change Scoping Plan, a Framework for Change*.

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TABLE 4.6-3 SCOPING PLAN GHG REDUCTION MEASURES AND REDUCTIONS TOWARD 2020 TARGET

Recommended Reduction Measures	Reductions Counted toward 2020 Target of 169 MMT CO ₂ e	Percentage of Statewide 2020 Target
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets ^a	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
<i>Total Cap and Trade Program Reductions</i>	<i>146.7</i>	<i>87%</i>
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
<i>Total Uncapped Sources/Sectors Reductions</i>	<i>27.3</i>	<i>16%</i>
<i>Total Reductions Counted toward 2020 Target</i>	<i>174</i>	<i>100%</i>
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations ^b	To Be Determined	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
<i>Total Other Recommended Measures – Not Counted toward 2020 Target</i>	<i>42.8</i>	<i>NA</i>

Notes: The percentages in the right-hand column add up to more than 100 percent because the emissions reduction goal is 169 MMT CO₂e and the Scoping Plan identifies 174 MMT CO₂e of emissions reductions strategies.

MMT CO₂e: million metric tons of CO₂e

a Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.

b According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO₂e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 target.

Source: California Air Resources Board, 2008, Climate Change Scoping Plan: A Framework for Change.

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2014 Update to the Scoping Plan

CARB recently completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The final Update to the Scoping Plan was released in May 2014, and CARB adopted it at the May 22, 2014 board hearing. The Update to the Scoping Plan defines CARB's climate change priorities for the next five years and lays the groundwork to reach post-2020 goals in Executive Orders S-03-05 and B-16-2012. The update includes the latest scientific findings related to climate change and its impacts, including short-lived climate pollutants. The GHG target identified in the 2008 Scoping Plan is based on IPCC's GWPs identified in the Second and Third Assessment Reports (see Table 4.6-1). IPCC's Fourth and Fifth Assessment Reports identified more recent GWP values based on the latest available science. CARB recalculated the 1990 GHG emission levels with the updated GWPs in the Fourth Assessment Report, and the 427 MMT CO₂e 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher, at 431 MMT CO₂e.²⁴

The update highlights California's progress in meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the Update to the Scoping Plan also addresses the State's longer-term GHG goals within 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 mid-term 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.²⁵

According to the Update to the Scoping Plan, 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 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.²⁶

Senate Bill 375

In 2008, Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reduction targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intention is to reduce GHG emissions from light-duty trucks and automobiles (excluding 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

²⁴ California Air Resources Board (CARB), 2014. *Proposed First Update to the Climate Change Scoping Plan: Building on the Framework*, http://www.arb.ca.gov/cc/scopingplan/2013_update/draft_proposed_first_update.pdf, May 15, 2014.

²⁵ California Air Resources Board (CARB), 2014. *Proposed First Update to the Climate Change Scoping Plan: Building on the Framework*, http://www.arb.ca.gov/cc/scopingplan/2013_update/draft_proposed_first_update.pdf, May 15, 2014.

²⁶ California Air Resources Board (CARB), 2014. *Proposed First Update to the Climate Change Scoping Plan: Building on the Framework*, http://www.arb.ca.gov/cc/scopingplan/2013_update/draft_proposed_first_update.pdf, May 15, 2014.

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region. MTC's targets are a 7 percent per capita reduction in GHG emissions from 2005 by 2020, and 15 percent per capita reduction from 2005 levels by 2035.²⁷

Plan Bay Area: Strategy for a Sustainable Region

Plan Bay Area is the Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). The Plan Bay Area was adopted jointly by ABAG and MTC July 18, 2013.²⁸ The SCS lays out a development scenario for the region, which when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. According to Plan Bay Area, the Plan meets a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

As part of the implementing framework for Plan Bay Area, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth in the Bay Area by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs in the region.²⁹ The Project site is not within a PDA.³⁰

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavely I). Pavely 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 Pavely I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (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.³¹

²⁷ California Air Resources Board, 2010. Staff Report, Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375, August.

²⁸ It should be noted that the Bay Area Citizens filed a lawsuit on MTC's and ABAG's adoption of *Plan Bay Area*.

²⁹ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area: Strategy for a Sustainable Region*, July 18.

³⁰ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area*, <http://geocommons.com/maps/141979>.

³¹ 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.

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Executive Order S-01-07

On January 18, 2007, the State set a new low carbon fuel standard (LCFS) for transportation fuels sold within the State. Executive Order S-01-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS requires 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 would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the State identified that CARB, the California Energy Commission (CEC), the 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 zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-emission 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 zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector 80 percent below 1990 levels.

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

A major component of California's Renewable Energy Program is the renewable portfolio standard (RPS) established under Senate Bills 1078 (Sher) and 107 (Simitian). 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. CARB has now approved an even higher goal of 33 percent by 2020. In 2011, the State legislature adopted this higher standard in SBX1-2. Executive Order S-14-08 was signed in November 2008, which expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. 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.

California Building Code

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2013 (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. On May 31, 2012, the CEC adopted the 2013 Building and Energy Efficiency Standards, which went into effect on July 1, 2014. Buildings that are constructed in accordance with the 2013 Building and Energy Efficiency Standards are 25 percent (residential) to 30 percent (non-residential) more energy efficient than the 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

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On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, CCR). 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.³² The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and have since been updated in 2013 and became effective January 1, 2014.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (Title 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.

Local Regulations

City of San Leandro Climate Action Plan

The City of San Leandro prepared a Climate Action Plan (CAP) that was adopted on December 21, 2009.³³ The CAP guides the City of San Leandro towards a sustainable future that reduces GHG emissions from current levels, while promoting economic prosperity for present and future generation. To achieve the City's vision, the City's CAP includes municipal and community emissions inventories for 2005 and 2020 forecasts; a GHG reduction goal to reduce GHG emissions by 25 percent below 2005 level by 2020; and GHG reduction measures to achieve the City's GHG reduction target. The GHG reduction measures include measures to reduce energy use in buildings, transportation emissions, solid waste disposal, and GHG emissions from municipal operations. The City has been tracking and monitoring GHG emissions in the City in accordance with the goals of the CAP. The last progress report on the City's CAP was prepared in 2013.³⁴

City of San Leandro Municipal Code

The City of San Leandro Municipal Code contains ordinances for the City. Title 3, Chapter 3-7, Construction and Demolition Debris Waste Reduction and Recycling Requirement, establishes regulations to comply with the California Waste Management Act of 1989. The City of San Leandro has adopted construction and demolition debris diversion requirements that are consistent with the new requirements under CALGreen for mandatory construction recycling. Construction and demolition debris recycling requirements vary by project type. Pursuant to the Article 2, projects involving construction, demolition or

³² The green building standards became mandatory in the 2010 edition of the code.

³³ San Leandro, City of. 2009. City of San Leandro Climate Action Plan, A Vision for a Sustainable San Leandro. Prepared by KEMA, December 21.

³⁴ San Leandro, City of, 2013, San Leandro Climate Action Plan Update, City Council, <https://sanleandro.org/civicax/filebank/blobdload.aspx?blobid=14971>, March 4.

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renovation that have a project valuation in excess of \$100,000 are required to adhere to the City's construction and demolition diversion requirements. Applicants for any covered project are required to recycle or divert (recycle or salvage) at least 100 percent of asphalt and concrete and recycle 50 percent of the remainder of the construction and demolition debris. Applicants of covered projects are required to complete and submit a Debris Recycling Statement (DRS) on a form approved by the City. The DRS form completed by an applicant is required to include:

- The estimated volume or weight of the construction and demolition debris, by type of material generated.
- The estimated volume or weight of materials that can feasibly be diverted via reuse or recycling.
- The vendor or facility that the applicant proposes to use to salvage, collect and/or receive diverted material.
- The estimated volume or weight of materials that will be deposited in a landfill.

4.6.1.2 EXISTING CONDITIONS

Existing San Leandro Shoreline Development Emissions

Portions of the approximately 52-acre land area and 23-acre water area of the Project site are currently occupied by a public boat harbor and various commercial and recreational uses. The boat slips are currently only 30 percent occupied (140 occupied boat slips), primarily due to the build-up of silt in the harbor and channel. The smaller fraction of boats within the harbor may be being used as housing.³⁵ Other uses within the Project site include a golf course, the library, the Spinnaker Yacht Club, the San Leandro Yacht Club, the marina office, El Torito restaurant, and several bathroom facilities, among other uses. GHG emissions generated by existing land uses in the San Leandro Shoreline Development were modeled with CalEEMod 2013.2.2, based on trip generation provided by Kittelson & Associates, and emission rates for boats (pleasure-crafts), based on fuel sales in the harbor provided by the City.³⁶ GHG emissions are shown in Table 4.6-4.

4.6.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, the Project would result in a significant GHG emissions impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

³⁵ The current estimated population within the Project site is between 16 to 20 live-aboard residents, based upon correspondence between Steve Noack (PlaceWorks) and Delmarie Snodgrass, City of San Leandro, September 5, 2014.

³⁶ Emission rates for boats estimated from *Port of Los Angeles Baseline Air Emissions Inventory* (Starcrest Consulting Group, LLC, 2005).

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TABLE 4.6-4 GHG EMISSIONS GENERATED BY EXISTING LAND USES WITHIN THE SAN LEANDRO SHORELINE DEVELOPMENT

Category	GHG Emissions (MTCO ₂ e/Year)	
	Existing 2014	Percent of Total
Area ^a	<1	<1
Energy ^a	664	13
On-Road Mobile Sources ^a	4,298	84
Waste ^a	129	3
Water/Wastewater ^a	11	<1
Boats (Pleasure-Crafts) ^b	39	1
Total	5,141	100%

Note: Emissions may not total to 100 percent due to rounding.

a. CalEEMod 2013.2.2. Based on year 2014 emission rates. No trip generation is assumed for the 16-20 live-aboard boat residences.

b. Starcrest, 2005. *Port of Los Angeles Baseline Air Emissions Inventory*.

4.6.2.1 BAAQMD PROJECT-LEVEL SIGNIFICANCE CRITERIA

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts.

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not determine whether the thresholds of significance were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA.

Following the court's order, the BAAQMD released revised CEQA Air Quality Guidelines in May 2012 that included guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. The BAAQMD recognizes that lead agencies may rely on the previously recommended Thresholds of Significance contained in its CEQA Guidelines adopted in 1999. The Alameda County Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or evidence supporting the thresholds. The City finds, therefore, that despite the Superior Court's ruling, and in light of the subsequent case history discussed below, the science and reasoning contained in

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the BAAQMD 2011 CEQA Air Quality Guidelines provide the latest state-of-the-art guidance available. For that reason, substantial evidence supports continued use of the BAAQMD 2011 CEQA Air Quality Guidelines.

On August 13, 2013, the First District Court of Appeal reversed the trial court judgment and upheld the BAAQMD's CEQA Guidelines. In addition to the City's independent determination that use of the BAAQMD's CEQA Guidelines is supported by substantial evidence, they have been found to be valid guidelines for use in the CEQA environmental review process. On November 26, 2013, the California Supreme Court granted review on the issue of whether CEQA requires analysis of how existing environmental conditions affect a project (*California Building Industry Association v Bay Area Air Quality Management District*, Case No. A135335 and A136212).

In addition, CEQA grants local agencies broad discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence. Accordingly, the City of San Leandro is using the BAAQMD's 2011 thresholds to evaluate project impacts in order to protectively evaluate the potential effects of the project on GHG emissions.

Greenhouse Gas Emissions

In the absence of an applicable qualified GHG reduction strategy, BAAQMD has identified screening criteria and significance criteria for development projects that would be applicable to the Project. If a project exceeds the Guidelines' GHG screening-level sizes, the project would be required to conduct a full GHG analysis using the following BAAQMD's significance criteria:

- 1,100 MT of CO₂e per year; or
- 4.6 MT of CO₂e per service population (SP).

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. 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 CO₂ emissions are not included in the quantification of a project's GHG emissions, because biogenic CO₂ 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. Although GHG emissions from waste generation are included in the GHG inventory for the Project, the efficiency threshold of 4.6 MTCO₂e per service population identified above do not include the waste sector and therefore are not considered in the evaluation.

BAAQMD does not have thresholds of significance for construction-related GHG emissions, but requires quantification and disclosure of construction-related GHG emissions.

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4.6.3 IMPACT DISCUSSION

Methodology

GHG emissions from construction and operation of the Project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. Transportation emissions are based on trip generation provided by Kittelson & Associates. Construction emissions are based on the construction schedule provided by the City.

This section discusses the GHG emissions impacts of the Project. This discussion is organized by and responds to each of the potential impacts identified in the thresholds of significance.

GHG-1	Implementation of the Project could directly or indirectly generate GHG emissions that may have a significant impact on the environment.
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A project does not generate enough GHG emissions on its own to influence global climate change; therefore, the GHG chapter measures a project's contribution to the cumulative environmental impact. Development under the Project would contribute to global climate change through direct and indirect emissions of GHG from transportation sources, energy (natural gas and purchased energy), water use and wastewater generation, and solid waste generation. Construction emissions (total and amortized over a 30-year duration)) are provided for informational purposes. The total and net increases in GHG emissions associated with the Project are shown in Table 4.6-5.

BAAQMD does not have thresholds of significance for construction-related GHG emissions. GHG emissions from construction activities are one-time, short-term emissions and therefore, would not significantly contribute to long-term cumulative GHG emissions impacts of the Project. One-time, short-term emissions are converted to average annual emissions by amortizing them over the service life of a building. For buildings in general, it is reasonable to look at a 30-year timeframe as this is a typical interval before a new building requires the first major renovation.³⁷ As shown in Table 4.6-5, when amortized over an average 30-year project lifetime, average annual construction emissions from the Project would represent a nominal source of GHG emissions and would not exceed BAAQMD's *de minimus* bright line threshold of 1,100 MTCO₂e. Construction emissions are *less than significant*.

As shown in Table 4.6-5, the net increase GHG emissions generated by the operational phase of the Project would exceed BAAQMD's bright-line significance criteria of 1,100 MTCO₂e; and therefore, GHG emissions impacts are evaluated based on the Project-efficiency. As identified in Table 4.6-5, the Project would exceed the BAAQMD performance criteria of 4.6 MTCO₂e/SP. Consequently, GHG emissions impacts of the Project are *significant*.

³⁷ International Energy Agency.2008, March. Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings.

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TABLE 4.6-5 SAN LEANDRO SHORELINE DEVELOPMENT GHG EMISSIONS FORECAST

Category	GHG Emissions (MTCO ₂ e/Year)			
	Existing 2014	Project 2020	Percent of Total	Change From Existing
Construction Emissions				
Total Construction Emissions	NA	6,754	NA	6,754
30-Year Amortized Construction	NA	225	NA	225
Operational Emissions				
Area ^a	<1	37	<1	37
Energy ^a	664	3,060	23	2,396
On-Road Mobile Sources ^a	4,298	10,027	74	5,729
Waste ^a	129	355	3	226
Water/Wastewater ^a	11	73	1	61
Boats (Pleasure-Crafts) ^b	39	<1	<1	-39
Total	5,141	13,552	100%	8,410
Total without Waste ^c	5,013	13,197	—	8,184
Service Population (SP) ^d	92	1,973	—	1,881
MTCO ₂ e/SP	54.5	6.7	—	—
BAAQMD Efficiency Threshold	—	4.6 MTCO ₂ e/SP	—	—
Exceeds BAAQMD Target?	—	Yes	—	—

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014). Assumes all fireplaces are gas-burning fireplaces in accordance with BAAQMD Regulation 6, Rule 3.

a. CalEEMod 2013.2.2. Based on year 2014 emission rates. No trip generation is assumed for the 16 live-aboard boat residences.

b. Starcrest, 2005. *Port of Los Angeles Baseline Air Emissions Inventory*.

c. BAAQMD did not include solid waste emissions when developing the per capita significance thresholds. Therefore, total GHG emissions with and without the Waste Generation sector are included. If these emissions are included in the analysis for the Project, Project per capita emissions would be 6.9 MTCO₂e/SP/yr.

d. Service population (SP) is based on 16 residents and 76 employees (existing) and 970 residents and 1,003 employees (Project).

Impact GHG-1: Implementation of the Project would directly or indirectly generate GHG emissions that may have a significant impact on the environment.

Mitigation Measure GHG-1A: Residential developments that include garage parking shall be electrically wired to accommodate electric vehicle charging. The location of the electrical outlets shall be specified on building plans and proper installation shall be verified by the San Leandro Building and Safety Division prior to issuance of a Certificate of Occupancy.

Mitigation Measure GHG-1B.: Electrical vehicle Level 2 charging stations shall be provided for the hotel and office land uses for the review and approval of the San Leandro Community Development Director. A minimum of one electric vehicle charging space shall be provided for every 25,000 square feet of non-residential building square footage. The location of the electrical vehicle charging stations

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shall be specified on site plans, and proper installation shall be verified by the Building and Safety Division prior to issuance of a Certificate of Occupancy.

Mitigation Measure GHG-1C: Applicant-provided appliances shall be Energy Star appliances (dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star appliances shall be verified by the San Leandro Building and Safety Division during plan check.

Mitigation Measure GHG-1D: Applicants, or their designee, for large non-residential development projects (e.g., employers with 50 employees at work site) shall establish an employee trip commute reduction program (CTR), in conformance with the Bay Area Air Quality Management District's Commuter Benefits Program (California Government Code Section 65081). The program shall offer one of the following commuter benefit options:

- Pre-tax benefit: Allow employees to exclude their transit or vanpooling expenses from taxable income, up to \$130 per month.
- Employer provided subsidy: Provide a subsidy to reduce or cover employees' monthly transit or vanpool costs, up to \$75 per month.
- Employer-provided transit: Provide a free or low-cost transit service for employees, such as a bus, shuttle or vanpool service.
- Alternative commuter benefit: Provide an alternative commuter benefit that is as effective in reducing single-occupancy commute trips, as the options above.

The employer shall also provide information about other commute options and connect commuters for carpooling, ridesharing, and other activities. The CTR program shall identify alternative modes of transportation to the Project Site, including transit schedules, bike and pedestrian routes, and carpool/vanpool availability. Information regarding these programs shall be readily available to employees and clients and shall be posted in a highly visible location and/or made available online. The project applicant shall consider the following additional incentives for commuters as part of the CTR program:

- Preferential carpool parking.
- Flexible work schedules for carpools.
- Telecommute and/or flexible work hour programs.
- Car-sharing program (e.g., Zipcar).
- Bicycle end-trip facilities, including bike parking, showers, and lockers.

The CTR program shall be prepared for the review and approval by the Community Development Director prior to occupancy permits.

Mitigation Measure GHG-1E: Applicants for new development projects within the San Leandro Shoreline Development shall achieve either the Build-it-Green GreenPoint Rated or US Green Building Council's Leadership in Energy and Environmental Design (LEED) standards that are endorsed by the City.

Mitigation Measure GHG-1F: Applicants for future projects within the Project shall design individual habitable residential and non-residential structures to be 15 percent more energy efficient than the

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current Building and Energy Efficiency Standards. The 15-percent reduction in building envelope energy use shall be based on the current Building and Energy Efficiency Standards (Title 24, Part 6, of the California Building Code) that is in place at the time building permits are submitted to the City. Architectural plans submitted to the City Building Division shall identify the requirement to reduce building energy use by 15 percent to meet this requirement.

Significance After Mitigation: Significant and unavoidable. Mitigation Measures GHG-1A and GHG-1B would require applicants for new development projects within the San Leandro Shoreline Development to designate spaces for electric vehicle charging in residential units and in the hotel and office developments in order to encourage residents and other motorists to take zero- or near-zero emission vehicles or alternative modes of transportation. Mitigation Measure GHG-1C would require installation of energy efficient appliances to reduce natural gas consumption and energy demand from new buildings. Mitigation Measure GHG 1D would require employers to establish employee trip commute reduction program to promote alternative modes of transportation to the Project Site and reduce GHG emissions from mobile sources. Furthermore, adherence to the City's Green Building Checklist (Mitigation Measure GHG-1E) to ensure compliance with the 2013 California Green Building Standards Code would ensure that new buildings are energy efficient by requiring both residential and nonresidential construction to be constructed to be more energy efficient. Mitigation Measures GHG-1A through GHG-1F would reduce operational GHG emissions to the extent practicable. However, the amount of reduction in emissions cannot be quantified, therefore it is not known whether the reductions would fall below the significance threshold. As such, GHG emissions would continue to exceed the BAAQMD regional significance thresholds and GHG-1 would remain significant and unavoidable.

GHG-2 Implementation of the Project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

The following plans have been adopted and are applicable for the Project:

CARB's Scoping Plan

In accordance with AB 32, CARB developed the Scoping Plan to outline the State's strategy to achieve 1990 level emissions by year 2020. To estimate the reductions necessary, CARB projected statewide 2020 BAU GHG emissions (i.e., GHG emissions in the absence of statewide emission reduction measures). CARB identified that the State as a whole would be required to reduce GHG emissions by 28.5 percent from year 2020 BAU to achieve the targets of AB 32.³⁸ The revised BAU 2020 forecast shows that the state would have to reduce GHG emissions by 21.6 percent from BAU without implementation of the Pavley GHG emission standards for passenger vehicles and the 33 percent renewable portfolio standard (RPS) for electricity, or 15.7 percent from the adjusted baseline (i.e., with Pavley and 33 percent RPS).³⁹

³⁸ California Air Resources Board (CARB). 2008. October. *Climate Change Proposed Scoping Plan, a Framework for Change*.

³⁹ California Air Resources Board (CARB), 2012. *Status of Scoping Plan Recommended Measures*, http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf.

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Statewide strategies to reduce GHG emissions include the LCFS; California Appliance Energy Efficiency regulations; California Building Standards (i.e., CALGreen and the 2008 Building and Energy Efficiency Standards); California Renewable Energy Portfolio standard (33 percent RPS); changes in the corporate average fuel economy standards (i.e., Pavley I and Pavley II); and other measures that would ensure the State is on target to achieve the GHG emissions reduction goals of AB 32. Statewide GHG emissions reduction measures that are being implemented over the next six years would reduce the Project's GHG emissions.

New residential and non-residential construction for the Project would be subject to the current building and energy efficiency standards. The new buildings would be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems. Therefore, impacts would be *less-than-significant*.

MTC's Plan Bay Area

To achieve ABAG's/MTC'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 PDAs. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs.

The Project site is not within a PDA identified in Plan Bay Area. However, the Project is an infill development project that would improve the existing facilities along the shoreline and increase residential and non-residential land uses intensity at the Project site. In addition, the Project would improve non-motorized access to the harbor and would develop a Class I bicycle facility along the waterfront. Consequently, the Project is consistent with the overall goals of Plan Bay Area, which include concentrating new development in locations where there is existing infrastructure. Therefore, the Project would not conflict with land use concept plan in Plan Bay Area.

City of San Leandro Climate Action Plan

The City of San Leandro prepared a CAP to reduce community and municipal GHG emissions. The measures identified in the City's CAP represent the City's actions to reduce GHG emissions in the City. While this CAP is not a "qualified" CAP because it does not meet the objectives identified in CEQA Guidelines Section 15183.5⁴⁰ the overall goals of the CAP help the City reduce GHG emissions. Therefore, a qualitative consistency analysis of the Project design features that achieve the applicable community actions in the City's CAP is provided below:

⁴⁰ In order to tier off a GHG reduction plan, Section 15183.5 of the CEQA Guidelines requires that the plan include a GHG emissions inventory of existing conditions and an emissions forecast, identify a GHG reduction target for the forecast year that would not cumulatively contribute to GHG emissions, identify and analyze GHG reduction measures, measures must include performance standards that substantial evidence demonstrates would achieve the emissions reductions necessary, the plan must establish a mechanism to monitor the plan's progress toward achieving the GHG reductions, and the plan must be adopted in the a public process following environmental review.

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- Require “beyond compliance” as a condition for approving new construction. Since adoption of the City’s CAP, the California Energy Commission (CEC) has updated the Building and Energy Efficiency Standards. If constructed today, development allowed by the Project would achieve the 2013 Building and Energy Efficiency Standards. The 2013 Building and Energy Efficiency Standards are 25 percent more energy efficient for residential buildings than the 2008 standards, which are 15 percent more energy efficient than the 2005 standards.
- Establish mandatory green building ordinance for private new construction. Since adoption of the City’s CAP, the State of California has promulgated the California Green Building Standards Code (CALGreen). In addition to the increase building energy efficiency described above, CALGreen requires consideration of other sustainable features into the design of a project.
- Improve bike routes for safety. The Project would result in several bikeway and pedestrian trail improvements along the shoreline. One of the primary objectives of the Project would be to enhance connections between the shoreline and the San Francisco Bay Trail. The Project would improve non-motorized access to the harbor and would develop a Class I bicycle facility along the waterfront. In addition, the Project would include a pedestrian/bicycle bridge across the existing harbor entrance.
- Improve crossings for pedestrians and cyclists at intersections in the City. The Project would ensure that intersection crossings would allow for safe crossings of pedestrians and bicyclists. Furthermore the Project would be to enhance connections between the shoreline and the San Francisco Bay Trail. In addition, the Project would include a pedestrian/bicycle bridge across the existing harbor entrance to improve pedestrian/bicycle crossing.
- Increase urban forest canopy. Many of the existing trees will remain in place. Individual land uses within the Project site are required by the City to prepare and implement a landscaping plan that would include tree planting to improve/increase the urban forestry canopy. The City requires parking lot trees (1 tree per 6 stalls) and would require adherence to Article 19, *Landscaping Requirements*, of Zoning Code.
- Consider a mandatory curbside recycling and composting programs. The City of San Leandro has implemented a recycling program available to residents and business within the City. In addition, Assembly Bill 341 (AB 341) (2011), which is identified in CARB’s 2008 Scoping Plan, requires mandatory commercial recycling to meet the waste diversion goals. Senate Bill 1018 (SB 1018) (2012) also requires that business that generate 4 cubic yards of more of commercial solid waste per week arrange for recycling service. Tenants within the Project are required to implement a commercial recycling program for recycling.

The Project includes the design features above that would reduce Project-related GHG emissions and would ensure that the Project would not interfere with the City’s ability to implement the actions in the CAP. Therefore, this impact is considered *less than significant*.

Conclusion

Implementation of the Project policies as well as compliance with applicable State standards listed and described above would ensure consistency with State and regional GHG reduction planning efforts. Therefore, this impact would be *less than significant*.

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Applicable Regulations:

- California Global Warming Solutions Act (AB 32)
- Sustainable Communities and Climate Protection Act (SB 375)
- Greenhouse Gas Emission Reduction Targets (Executive Order S-3-05)
- Clean Car Standards – Pavely (AB 1493)
- Renewable Portfolio Standards (SB 1078)
- California Integrated Waste Management Act of 1989 (AB 939)
- California Mandatory Commercial Recycling Law (AB 341)
- California Advanced Clean Cars CARB/ Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Heavy-Duty Vehicle Greenhouse Gas Emissions Reduction Measure (Title 17 CCR)
- Low Carbon Fuel Standard (Title 17 CCR)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

Significance Before Mitigation: Less than significant.

4.6.4 CUMULATIVE IMPACT DISCUSSION

GHG-3 **Implementation of the Project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to GHG emissions.**

As described above, GHG emissions related to the Project are not confined to a particular air basin but are dispersed worldwide. Therefore, the analysis of impacts in Section 4.6.3, Impact Discussion, above, also addresses the Project as a contributor to cumulative impacts. As identified in Impact GHG-1, Table 4.6-5 shows that operation of the Project would exceed BAAQMD's efficiency metric. Consequently, GHG emissions impacts of the Project are cumulatively considerable, and therefore *significant*.

Applicable Regulations:

- None

Impact GHG-3: Implementation of the Project would directly or indirectly generate GHG emissions that may have a cumulatively considerable and therefore significant impact on the environment.

Mitigation Measure GHG-3: Implementation of Mitigation Measures GHG-1A through GHG-1F would reduce cumulative GHG emissions impacts.

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Significance After Mitigation: Significant and unavoidable. Mitigation Measures GHG-1A through GHG-1F would reduce operational GHG emissions to the extent practicable. However, GHG emissions would continue to exceed the BAAQMD regional significance thresholds resulting in cumulatively considerable GHG emissions and GHG-3 would remain significant and unavoidable.

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HAZARDS AND HAZARDOUS MATERIALS

4.7 HAZARDS AND HAZARDOUS MATERIALS

This chapter describes the regulatory framework and existing conditions related to hazards and hazardous materials within the Project site, and the potential resulting impacts from development of the Project.

4.7.1 ENVIRONMENTAL SETTING

4.7.1.1 REGULATORY FRAMEWORK

Hazardous materials refer generally to hazardous substances, hazardous waste, and other materials that exhibit corrosive, poisonous, flammable, and/or reactive properties and have the potential to harm human health and/or the environment. Hazardous materials are used in products (e.g., household cleaners, industrial solvents, paint, pesticides, etc.) and in the manufacturing of products (e.g., electronics, newspapers, plastic products, etc.). Hazardous materials can include petroleum, natural gas, synthetic gas, acutely toxic chemicals, and other toxic chemicals that are used in agriculture, commercial, and industrial uses; businesses; hospitals; and households. Accidental releases of hazardous materials have a variety of causes, including highway incidents, warehouse fires, train derailments, shipping accidents, and industrial incidents.

The term “hazardous materials” as used in this section includes all materials defined in the California Health and Safety Code (H&SC Section 25501(m)):

“A material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. ‘Hazardous materials’ include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.”

The term includes chemicals regulated by the United States Department of Transportation (USDOT), the United States Environmental Protection Agency (USEPA), the California Department of Toxic Substances Control (DTSC), the California Governor’s Office of Emergency Services (CalOES), and other agencies as hazardous materials, wastes, or substances. “Hazardous waste” is any hazardous material that has been discarded, except those materials specifically excluded by regulation. Hazardous materials that have been intentionally disposed of or inadvertently released fall within the definition of “discarded” materials and can result in the creation of hazardous waste. Hazardous wastes are broadly characterized by their ignitability, toxicity, corrosivity, reactivity, radioactivity, or bioactivity. Federal and State hazardous waste definitions are similar, but contain enough distinctions that separate classifications are in place for federal Resource Conservation and Recovery Act (RCRA) hazardous wastes and State non-RCRA hazardous wastes. Hazardous wastes require special handling and disposal because of their potential to impact public health and the environment. Some materials are designated “acutely” or “extremely” hazardous under relevant statutes and regulations.

Hazardous materials and wastes can pose a significant actual or potential hazard to human health and the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Many federal, State, and local programs that regulate the use, storage, and transportation of hazardous

HAZARDS AND HAZARDOUS MATERIALS

materials and hazardous waste are in place to prevent these unwanted consequences. These regulatory programs are designed to reduce the danger that hazardous substances may pose to people and businesses under normal daily circumstances and as a result of emergencies and disasters.

Federal Agencies and Regulations

United States Environmental Protection Agency

The USEPA laws and regulations ensure the safe production, handling, disposal, and transportation of hazardous materials. Laws and regulations established by the USEPA are enforced in Alameda County by the California Environmental Protection Agency (CalEPA).

United States Department of Transportation

The USDOT has the regulatory responsibility for the safe transportation of hazardous materials between states and to foreign countries. The USDOT regulations govern all means of transportation, except for those packages shipped by mail, which are covered by United States Postal Service (USPS) regulations. The federal Resource Conservation and Recovery Act of 1976 imposes additional standards for the transport of hazardous wastes.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) oversees the administration of the Occupational Safety and Health Act, which requires specific training for hazardous materials handlers, provision of information to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets (MSDS) from materials manufacturers. The MSDS describe the risks, as well as proper handling and procedures, related to particular hazardous materials. Employee training must include response and remediation procedures for hazardous materials releases and exposures.

State Agencies and Regulations

California Health and Safety Code and Code of Regulations

California Health and Safety Code Chapter 6.95 and California Code of Regulations, Title 19, Section 2729 set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on-site. A business which uses hazardous materials or a mixture containing hazardous materials must establish and implement a business plan if the hazardous material is handled in certain quantities.

California Environmental Protection Agency

One of the primary agencies that regulate hazardous materials is the CalEPA. The State, through CalEPA, is authorized by the USEPA to enforce and implement certain federal hazardous materials laws and regulations. The California DTSC, a department of the CalEPA, protects California and Californians from exposure to hazardous waste, primarily under the authority of the RCRA and the California Health and

HAZARDS AND HAZARDOUS MATERIALS

Safety Code.¹ The DTSC requirements include the need for written programs and response plans, such as Hazardous Materials Business Plans (HMBPs). The DTSC programs include dealing with aftermath clean-ups 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.

California Division of Occupational Safety and Health

Like OSHA at the federal level, the California Division of Occupational Safety and Health (CalOSHA) is the responsible state-level agency for ensuring workplace safety. The CalOSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. In the event that a site is contaminated, a Site Safety Plan must be crafted and implemented to protect the safety of workers. Site Safety Plans establish policies, practices, and procedures to prevent the exposure of workers and members of the public to hazardous materials originating from the contaminated site or building.

California Building Code

The State of California provided 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 (CCR). The 2013 CBC is based on the 2012 International Building Code (IBC), but has been modified for California conditions. The CBC is updated every three years, and the current CBC went into effect in January 2014. It 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 local city and county building officials for compliance with the CBC typical fire safety requirements of the CBC; the installation of sprinklers in all high-rise buildings; the establishment of 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 wildlife hazard areas.

California Emergency Management Agency

The California Emergency Management Agency (CalEMA) was established as part of the Governor's Office on January 1, 2009 – created by Assembly Bill 38 (Nava), which merged the duties, powers, purposes, and responsibilities of the former Governor's Office of Emergency Services with those of the Governor's Office of Homeland Security. The CalEMA is responsible for the coordination of overall State agency response to major disasters in support of local government. The agency is responsible for assuring the State's readiness to respond to and recover from all hazards—natural, manmade, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

¹ Hazardous Substance Account, Chapter 6.5 (Section 25100 et seq.) and the Hazardous Waste Control Law, Chapter 6.8 (Section 25300 et seq.) of the Health and Safety Code.

HAZARDS AND HAZARDOUS MATERIALS

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California.² The CAL FIRE ranks fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include no fire threat, moderate, high, and very high fire threat. Additionally, the CAL FIRE produced the *2010 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.³

California Fire Code

California Code of Regulations, Title 24, also known as the California Building Standards Code, contains the California Fire Code (CFC), included as Part 9 of that Title. Updated every three years, 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. Similar to the CBC, the CFC is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions.

California Department of Transportation and California Highway Patrol

Two State agencies have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies: the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Caltrans manages more than 50,000 miles of California's highway and freeway lanes, 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 that occur on those highway and freeway lanes and intercity rail services.

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 assure 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 the California Vehicle Code, Section 32000. 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.

² CAL FIRE, http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_development.php, accessed on April 15, 2014.

³ CAL FIRE, *2010 Strategic Fire Plan for California*, <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf668.pdf>, accessed on April 15, 2014.

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Federal and State Hazardous Materials-Specific Programs and Regulations

Asbestos-Containing Materials Regulations

Asbestos-containing materials (ACM) are materials that contain asbestos, a naturally occurring fibrous mineral that has been mined for its useful thermal properties and tensile strength. ACM is generally defined as either friable or non-friable. Friable ACM is defined as any material containing more than one percent asbestos. Friable ACM is more likely to produce airborne fibers than non-friable ACM, and can be crumpled, pulverized, or reduced to powder by hand pressure. Non-friable ACM is defined as any material containing one percent or less asbestos. Non-friable ACM cannot be crumpled, pulverized, or reduced to powder by hand pressure. When left intact and undisturbed, ACM does not pose a health risk to building occupants. Potential for human exposure occurs when ACM becomes damaged to the extent that asbestos fibers become airborne and are inhaled. Inhalation of asbestos airborne fibers can lead to various health problems, the most serious of which includes lung disease.

State-level agencies, in conjunction with the USEPA and OSHA, regulate removal, abatement, and transport procedures for ACMs. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, federal, State, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos. Specifically, BAAQMD Regulation 11, Rule 2, requires a written plan or notification of intent to demolish or renovate be provided to the District at least ten working days prior to commencement of demolition or renovation.

Lead-based Paint

Lead-based paint (LBP), which can result in lead poisoning when consumed or inhaled, was widely used in the past to coat and decorate buildings. Lead poisoning can cause anemia and damage to the brain and nervous system, particularly in children. Like ACM, LBP generally does not pose a health risk to building occupants when left undisturbed; however, deterioration, damage, or disturbance will result in hazardous exposure. In 1978, the use of LBP was federally banned by the Consumer Product Safety Commission. Therefore, only buildings built before 1978 are presumed to contain LBP, as well as buildings built shortly thereafter, as the phase-out of LBP was gradual.

Polychlorinated Biphenyls

The USEPA prohibited the use of polychlorinated biphenyls (PCBs) in the majority of new electrical equipment starting in 1979, and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion of PCBs in electrical equipment and the handling of those PCBs are regulated by the provisions of the Toxic Substances Control Act (TSCA), 15 United States Code Section 2601 et seq. Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and outline highly specific safety procedures for their disposal. The State of California likewise regulates PCB-laden electrical equipment and materials contaminated above a certain threshold as hazardous waste; these regulations require that such materials be treated, transported, and disposed accordingly. At lower concentrations for non-liquids, regional water quality control boards may exercise discretion over the classification of such wastes.

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CalOSHA's Lead in Construction Standard is contained in Title 8, Section 1532.1 of the California Code of Regulations. The regulations address all of the following areas: permissible exposure limits (PELs); exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection (MRP); employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

Regional Agencies and 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 Region (Region 2) is the Regional Water Quality Control Board (San Francisco Bay RWQCB) which regulates water quality in the vicinity of the Project and Project site itself. The San Francisco Bay RWQCB has the authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened, and to require remediation actions, if necessary.

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 (which are the responsibility of CalEPA and California Air Resources Board [CARB]). The BAAQMD is responsible for preparing attainment plans for non-attainment criteria pollutants, control of stationary air pollutant sources, and the 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).

Alameda County Fire Department

The Alameda County Fire Department, (ACFD) through a contract for services, provides service to the City of San Leandro. These services include fire suppression, urban search and rescue, fire prevention and public education. The nearest fire stations to the Project site are ACFD Station 10 located less than one mile to the northeast and ACFD Station 11 located just over one mile to the southeast.

Airport Land Use Commission

Alameda County established an airport land use commission (ALUC), in accordance with State law, and subsequently adopted an Airport Land Use Compatibility Plan (ALUCP) for the Oakland International Airport (OAK). The ALUCP is the primary document used by the Alameda County ALUC to help promote compatibility between OAK and its environs. More specifically, the ALUCP acts as a guide for the ALUC and local jurisdictions in safeguarding the general welfare of the public as OAK and the areas surrounding the airport grow. This document also serves as a tool for the Alameda County ALUC in fulfilling its duty to review airport and land use development proposals within the airport influence area (AIA) or referral area associated with the airport. The Project site is within the AIA.

⁺ California Water Code Sections 13000 et seq.

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Local Agencies and Regulations

City of San Leandro Environmental Services Section

The State of California transferred administration and enforcement of major environmental programs to local agencies in 1996 in accordance with Senate Bill 1082 (Health and Safety Code 25404). The local agencies under this legislation are known as Certified Unified Program Agencies (CUPAs). The purpose of this legislation was to simplify environmental reporting by streamlining the number of regulatory agency contacts a facility must maintain, and by requiring the use of more standardized forms and reports.

The City of San Leandro Environmental Services Section (ESS) is the CUPA for San Leandro. As such, this section regulates the storage, use, treatment, and disposal of hazardous materials and wastes within the City. State CUPA programs for which the Environmental Services Division is responsible include the:

- Hazardous Materials Business Plan (HMBP) program;
- Hazardous waste generator program;
- California Accidental Release Program (CalARP);
- Above ground petroleum storage tank program;
- Underground tank program; and
- Tiered Permitting for on-site hazardous waste treatment.

In addition, the ESS is responsible for:

- Enforcement of the hazardous materials requirements of the Uniform Fire Code;
- Response to citizen's complaints; and
- Technical, investigative, and site cleanup services for hazardous materials incidents.

City of San Leandro General Plan 2002 (Updated 2011)

The City of San Leandro's General Plan was adopted by the San Leandro City Council in May 2002. The Plan was updated in 2011 with the certification of the city's new Housing Element. Chapter 6 of the San Leandro General Plan addresses environmental hazards in the City, including wildfire, hazardous materials, and emergency preparedness. Chapter 6 also establishes goals, policies, and actions, which are listed in Table 4.7-1, to reduce identified hazards to acceptable levels.

City of San Leandro Hazard Mitigation Master Plan

The City of San Leandro's Hazard Mitigation Master Plan (Hazard Plan) is intended to prepare the community for potential life threatening emergencies, such as fire, flood, and earthquakes. The Hazard Plan is essentially a "road map" for action involving hazard mitigation and emergency preparedness. In general, the Hazard Plan includes guiding principles, such as community education, establishing early warning systems for notifying the community of emergencies, and continuing training and updating of emergency preparedness.

HAZARDS AND HAZARDOUS MATERIALS

TABLE 4.7-1 GOALS, POLICIES AND ACTIONS OF THE SAN LEANDRO GENERAL PLAN RELATING TO HAZARDS AND HAZARDOUS MATERIALS, EMERGENCY PREPAREDNESS, AND AIRPORT IMPACTS

Goal/Policy Number	Goal/Policy/Action Text
Goal 30	WILDFIRE HAZARDS: Minimize urban wildfire hazards, both within the City and throughout the East Bay Hills.
Policy 30.01	Fire Prevention: Adopt and enforce building and fire prevention codes that require property owners to reduce wildfire hazards on their properties. Action 30.01-A: Creekside Vegetation Manage vegetation along San Leandro Creek to reduce wildfire hazards.
Policy 30.02	Fire Prevention: Ensure that the planning and design of development in high fire hazard areas minimizes the risks of wildfire and includes adequate provisions for vegetation management, emergency access, and firefighting.
Policy 30.03	Mutual Aid: Work collaboratively with other jurisdictions and agencies to reduce wildfire hazards in San Leandro, with an emphasis on effective vegetation management and mutual aid agreements. Action 30.03-A: Task Force Participation Continue to participate in multi-jurisdictional task forces and programs that address wildfire hazards in the East Bay Hills.
Goal 33	HAZARDOUS MATERIALS: Protect local residents and workers from the risks associated with hazardous materials.
Policy 33.01	Regulatory Compliance: Work with the appropriate county, regional, state, and federal agencies to develop and implement programs for hazardous waste reduction, hazardous material facility siting, hazardous waste handling and disposal, public education, and regulatory compliance. Action 33.01-A: CUPA Programs Continue to implement State programs as required by the City's Certified Unified Program Agency (CUPA) designation. Action 33.01-B: Implementation of County Hazardous Waste Management Plan Support Alameda County in the implementation and enforcement of the County Hazardous Waste Management Plan. Periodically review the Plan to ensure that it meets acceptable safety standards. Action 33.01-C: Review of Groundwater Reports Regularly review monitoring reports and other data published by state, federal, and regional agencies to track the condition of groundwater plumes and environmental cases in the City.
Policy 33.02	Clean-Up Of Contaminated Sites: Ensure that the necessary steps are taken to clean up residual hazardous wastes on any contaminated sites proposed for redevelopment or reuse. Require soil evaluations as needed to ensure that risks are assessed and appropriate remediation is provided.
Policy 33.03	Design Of Storage And Handling Areas: Require that all hazardous material storage and handling areas are designed to minimize the possibility of environmental contamination and adverse off-site impacts. Enforce and implement relevant state and federal codes regarding spill containment facilities around storage tanks. Action 33.03-A: Implement Fire Code Administer appropriate sections of the Uniform Fire Code to ensure that buildings comply with hazardous materials policies.
Policy 33.04	Separation From Sensitive Uses: Provide adequate and safe separation between areas where hazardous materials are present and sensitive uses such as schools, residences, and public facilities. Action 33.04-A: Zoning Review Consider zoning standards that ensure that new housing is not developed in areas where relatively large quantities of hazardous materials are handled or stored, and that limit the use of hazardous materials by new businesses located in or near residential areas.
Policy 33.05	Incident Response: Maintain the capacity to respond immediately and effectively to hazardous materials incidents. Provide ongoing training for hazardous materials enforcement and response personnel.

HAZARDS AND HAZARDOUS MATERIALS

TABLE 4.7-1 GOALS, POLICIES AND ACTIONS OF THE SAN LEANDRO GENERAL PLAN RELATING TO HAZARDS AND HAZARDOUS MATERIALS, EMERGENCY PREPAREDNESS, AND AIRPORT IMPACTS

Goal/Policy Number	Goal/Policy/Action Text
Policy 33.06	<p>Household Hazardous Wastes: Promote public education about the safe disposal of household hazardous waste, such as motor oil and batteries, including the locations of designated household hazardous waste disposal sites.</p> <p>Action 33.06-A: Publicity of Household Hazardous Waste Information Work with Alameda County and ACI to publicize household hazardous waste collection events and provide each household with information on the location and operating hours of the nearest household hazardous waste collection facilities.</p>
Policy 33.07	<p>Hazardous Building Materials: Ensure the safe and proper handling of hazardous building materials, such as friable asbestos and lead based paint. If such materials are disturbed during building renovation or demolition, they should be handled and disposed of in a manner that protects human health and the environment.</p>
Policy 33.08	<p>Public Awareness: Increase public awareness of hazardous material use and storage in the City, the relative degree of potential health hazards, and the appropriate channels for reporting odor problems and other nuisances.</p> <p>Action 33.08-A: Disclosure to Property Owners Pursuant to the California Health and Safety Code, enforce community disclosure laws (e.g., Right-to-Know laws) that inform property owners of the presence of hazardous materials nearby.</p>
Policy 33.09	<p>Community Preparedness: Ensure that the City’s Emergency Preparedness programs include provisions for hazardous materials incidents, as well as measures to quickly alert the community and ensure the safety of residents and employees following an incident.</p> <p>Action 33.09-A: Automated Dialing System Develop and implement an automated telephone dialing system to notify residents in the event of a disaster such as a chemical spill or other hazardous materials incident.</p>
Goal 34	<p>EMERGENCY PREPAREDNESS: Attain—and sustain—comprehensive and highly effective emergency preparedness and recovery programs.</p>
Policy 34.01	<p>Preparedness As A Top Priority: Establish emergency preparedness as a top City priority. Staffing and funding levels for local preparedness programs should be sufficient to keep all residents and business well informed and prepared in the event of a major earthquake or similar disaster.</p> <p>Action 34.01-A: Development of Emergency Operations Center Develop a dedicated Emergency Operations Center, possibly as a component of another new community facility such as a Senior Center.</p> <p>Action 34.01-B: Siting of Arks: Complete the siting of emergency supply cargo containers or “arks” at locations around the City by the end of 2002. Ensure that each ark is properly maintained and that the contents are periodically inspected and updated.</p> <p>Action 34.01-C: Essential Service Facility Upgrades Complete the seismic upgrades of the City’s essential service facilities, including fire stations.</p>
Policy 34.02	<p>SEMS Planning: Use the Standard Emergency Management System (SEMS) as the basis for the City’s Emergency Preparedness programs. The City should maintain and periodically update a SEMS-based emergency preparedness plan that provides direction and identifies responsibilities following a disaster.</p> <p>Action 34.02-A: Management Operations Plan Update Expand the City’s Emergency Preparedness Plan (the Management Operations Plan) to address hazard assessment, mitigation, evacuation routes, and post-disaster recovery.</p>
Policy 34.03	<p>Public Education And Awareness: Promote public education and awareness on all aspects of emergency preparedness, including the type and extent of hazards in the community, measures to reduce the likelihood of damage and injury, provisions for emergency supplies, steps to take immediately after a disaster, and the locations of shelters and medical facilities.</p> <p>Action 34.03-A: Educational Materials Prepare printed guides, handbooks, and other mass media that can be distributed to students, neighborhood groups and homeowners to improve emergency preparedness.</p>

HAZARDS AND HAZARDOUS MATERIALS

TABLE 4.7-1 GOALS, POLICIES AND ACTIONS OF THE SAN LEANDRO GENERAL PLAN RELATING TO HAZARDS AND HAZARDOUS MATERIALS, EMERGENCY PREPAREDNESS, AND AIRPORT IMPACTS

Goal/Policy Number	Goal/Policy/Action Text
	<p>Action 34.03-B: Staffing Levels Restore local Emergency Preparedness staffing to the level that existed before the transfer of community outreach services to the Alameda County Fire Department. Either the City or County should maintain a staff position that is dedicated solely to preparedness training and education within the City of San Leandro, and liaison to public and private schools in San Leandro. The establishment of an additional position dedicated to preparedness training for the City’s business community also should be considered.</p>
Policy 34.04	<p>Drills: Conduct periodic emergency response exercises to test the effectiveness of local preparedness procedures. Maintain SEMS training programs to ensure that City personnel are sufficiently prepared to respond to an emergency and staff an Emergency Operations Center.</p> <p>Action 34.04-A: Radio 1610 Maintain and upgrade Radio 1610 AM. Implement a program with the school districts to increase resident and student awareness of this broadcasting band, so that it may provide information as effectively as possible in the event of an emergency.</p> <p>Action 34.04-B: Siren Testing Conduct periodic testing of the City’s emergency warning sirens, and educate the public and school children about the procedures to follow in the event the sirens are sounded</p>
Policy 34.05	<p>Training Programs: Maintain community-based emergency preparedness training programs targeted to neighborhoods and businesses groups. Ensure that such programs respond directly to local needs and are well publicized throughout the community.</p>
Policy 34.06	<p>Emergency Shelters: Identify essential emergency facilities in the City, including shelters, and take the necessary actions to ensure that they will remain operational following a disaster.</p> <p>Action 34.06-A: Information on Shelters Develop a list of emergency shelters and medical facilities in the City. Publicize this information in local newspapers, neighborhood newsletters, cable TV, and printed materials.</p> <p>Action 34.06-B: Disaster Response Equipment Procure facilities and equipment to improve the City’s response capabilities following a major disaster, including mobile emergency communication and medical trailers, electric power generators, and ham radio equipment.</p>
Policy 34.07	<p>Schools and Hospitals: Coordinate local emergency preparedness efforts with the San Leandro and San Lorenzo Unified School Districts, and with local hospitals. Work with both School Districts to facilitate the seismic retrofitting of school buildings and to implement disaster preparedness curricula targeted to students.</p>
Policy 34.08	<p>Businesses and Social Service Agencies: Coordinate emergency planning efforts with other jurisdictions, the business community, and social service agencies, including agencies serving special needs groups such as seniors and persons with disabilities.</p>
Policy 34.09	<p>Multi-Lingual Information: Ensure that emergency preparedness information, including printed material, radio broadcasts, video, and other media, is available in Spanish, Chinese, and other major languages spoken by San Leandro residents, as well as in English.</p>
Policy 34.10	<p>Funding Sources: Pursue a variety of funding sources, such as grants, low-interest loans, and tax credits, to retrofit community facilities and assist residents and businesses with seismic upgrades.</p> <p>Action 34.10-A: Transfer Tax Rebates Consider a program wherein a portion of the local real property transfer tax would be rebated back to qualifying property owners undertaking seismic upgrades within one year after the purchase of the property.</p>
Goal 37	<p>AIRPORT IMPACTS: Minimize the local impacts and hazards created by air traffic, ground operations, and all other aviation activities, particularly those associated with Oakland International Airport</p>

HAZARDS AND HAZARDOUS MATERIALS

TABLE 4.7-1 GOALS, POLICIES AND ACTIONS OF THE SAN LEANDRO GENERAL PLAN RELATING TO HAZARDS AND HAZARDOUS MATERIALS, EMERGENCY PREPAREDNESS, AND AIRPORT IMPACTS

Goal/Policy Number	Goal/Policy/Action Text
Policy 37.01	<p>Monitoring of Airport Plans: Actively and aggressively participate in forums and discussions regarding operations and expansion plans for Oakland International Airport. Seek local representation on task forces, commissions, and advisory boards established to guide airport policies and programs.</p> <p>Action 37.01A: Participation in Airport-Community Noise Management Forum Supplement the City’s participation in the Airport- Community Noise Management Forum through local Airport Task Forces, such as the Neighborhood Aviation Advisory Committee (NAACSL). The mission of such task forces should be to monitor Airport plans and programs and advocate on behalf of residents and businesses impacted by Airport operations and expansion plans.</p> <p>Action 37.01-B: Staff Acoustical Engineer Explore the feasibility of creating a staff position (or training existing staff) requiring acoustical engineering expertise to advocate on behalf of the community, act as liaison to the community on aviation issues, and advise the City Council and other local officials on technical matters pertaining to the Airport.</p>
Policy 37.06	<p>Airport Safety Zones: Regulate Land Uses Within Designated Airport Safety Zones, Height Referral Areas, And Noise Compatibility Zones To Minimize The Possibility Of Future Noise Conflicts And Accident Hazards.</p>
Policy 37.09	<p>Aviation Accidents: Maintain a high degree of readiness to respond to aircraft accidents. Continue to participate in preparedness drills and mutual aid activities with the City of Oakland to ensure quick and effective response to emergencies.</p>
Policy 37.10	<p>Water Rescue Operations: Maintain the San Leandro Marina as the reconnaissance point for airport emergency response and water rescue operations.</p> <p>Action 37.10-A: Funding Applications Apply for federal funds which enable the Marina to continue to function effectively as an emergency response base for airport rescue operations.</p>

4.7.1.2 EXISTING CONDITIONS

This section describes existing conditions related to hazardous materials, airport hazards, and wildlife fires within 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. CEQA (California Public Resources Code 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:

- **EPA NPL:** The EPA’s National Priorities List includes all sites under the USEPA’s Superfund program, which was established to fund cleanup of contaminated sites that pose risk to human health and the environment.
- **EPA CERCLIS and Archived Sites:** The EPA’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 CERCLIS due to No Further Remedial Action Planned (NFRAP) status.

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- **EPA RCRIS (RCRA Info):** The Resource Conservation and Recovery Act Information System (RCRIS or RCRA Info) 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 (CalSites).
- **DTSC HazNet:** The DTSC uses this database to track hazardous waste shipments.
- **SWRCB LUSTIS:** This stands for the Leaking Underground Storage Tank Information System and the SWRCB maintains an inventory of USTs and leaking USTs, which tracks unauthorized releases.

The required lists of hazardous material release sites are commonly referred to as the “Cortese List” after the legislator who authorized the legislation. 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 and, 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 contained on internet websites hosted by the boards or departments referenced in the statute, including DTSC’s online EnviroStor⁵ database and the SWRCB’s online GeoTracker database.⁶ 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 July 16, 2014, revealed one listing within the Project site. The San Leandro Marine Center at 80 San Leandro Marina was listed as a Cleanup Program Site as a result of a release of waste oil (i.e., mix of motor, hydraulic, and lubricating oils) potentially affecting soil. The cleanup status of this site is “Completed-Case Closed,” as of October 27, 1995. In addition, the GeoTracker database identified one Undergrount Storage Tank (UST) permitted (Facility ID 01-007-000040) within the Project site located at 40 San Leandro Marina.

In addition, there are four major groundwater plumes in San Leandro that are undergoing site characterization and/or remediation.⁷ These are known as the 1964 Williams Street plume, the Caterpillar plume, the distant warm area (DWA) plume, and the Hester Street plume. The DWA plume is approximately 0.4 miles east of the Project site, as discussed in Chapter 4.8, Hydrology and Water Quality.

Existing or Proposed Schools

There are no existing or proposed schools within ¼-mile of the Project site. The nearest school is Garfield Elementary School located, at 13050 Aurora Drive, just over ¼-mile to the northeast.

⁵ DTSC Envirostor, <http://www.envirostor.dtsc.ca.gov/public/>.

⁶ SWRCB GeoTracker, <http://www.geotracker.waterboards.ca.gov/>.

⁷ Draft Environmental Impact Report, San Leandro General Plan Update, November 2001.

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Airport Hazards

The Oakland International Airport (OAK) is located less than 2 miles from the Project site to the northwest. The Project site is within the airport influence area, as described in Section 4.7.1.1, Regulatory Framework. There are no other public use airports within 2 miles of the Project site. Likewise, there are no private airstrips on or near the Project site.

Wildland Fire Hazard

CAL FIRE evaluates fire hazard severity risks according to areas of responsibility (i.e., federal, state, and local). According to CAL FIRE, and as depicted on Figure 4.7-1, there are no very high fire hazard severity zones (VHFHSZ) within the Local Responsibility Area with the exception of a small area near the City's south center boundary.⁸ Also as depicted on Figure 4.7-2, there are no moderate, high, and very high fire hazard severity zones in the State Responsibility Areas in the vicinity of the Project site.⁹

4.7.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, the Project would have a significant impact regarding hazards and hazardous materials if it would:

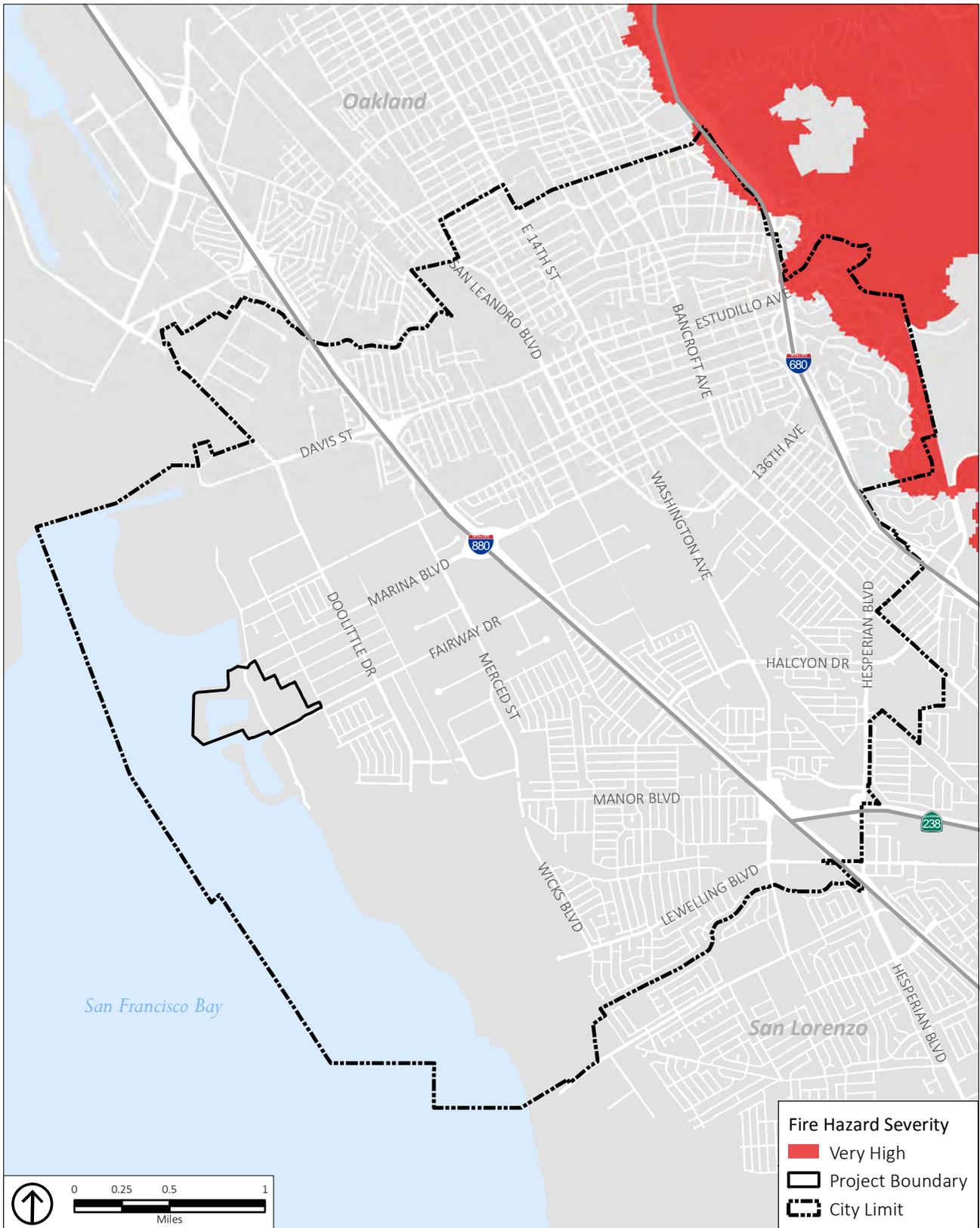
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school.
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
5. Be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport it results in a safety hazard for people residing or working in the project area.
6. Be within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.
7. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

⁸ California Department of Forestry and Fire Protection, 2008. *Alameda County Very High Fire Hazard Severity in LRA* map, accessed on July 16, 2014.

⁹ California Department of Forestry and Fire Protection, 2007. *Fire Hazards and Severity Zones in State Responsibility Areas*, http://frap.cdf.ca.gov/webdata/maps/alameda/fhszs_map.43.pdf, accessed on July 16, 2014.



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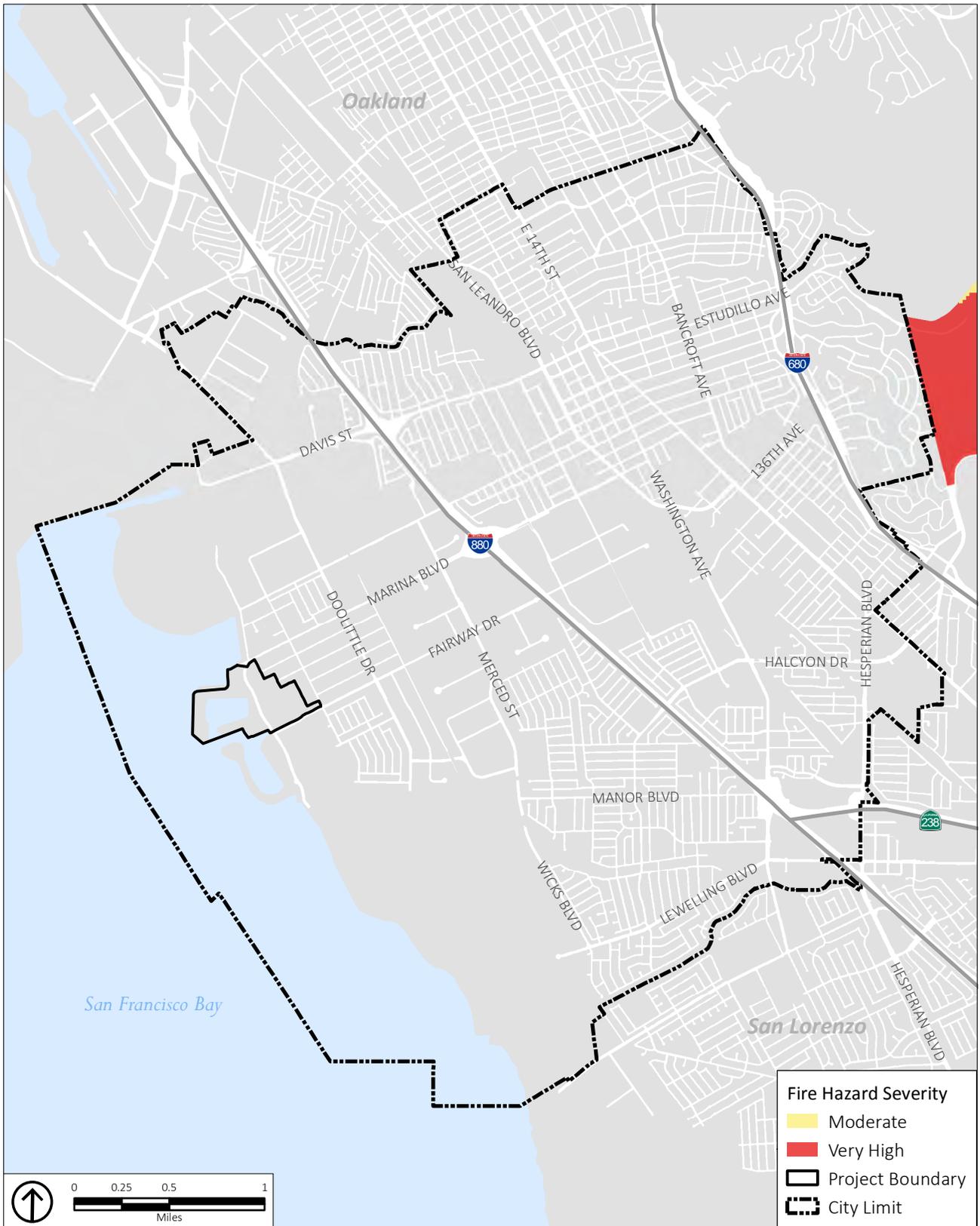


Source: Fire and resource Assessment Program (FRAP), 2007; Alameda County, 2013; City of San Leandro, 2014; PlaceWorks, 2014.

Figure 4.7-1
Very High Fire Hazard Severity Zones within the Local Responsibility Area



HAZARD AND HAZARDOUS MATERIALS



Source: Fire and resource Assessment Program (FRAP), 2007; Alameda County, 2013; City of San Leandro, 2014; PlaceWorks, 2014.

Figure 4.7-2
Fire Hazard Severity Zones in State Responsibility Areas

HAZARDS AND HAZARDOUS MATERIALS

8. 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.

4.7.2.1 THRESHOLDS NOT DISCUSSED FURTHER

With regard to Thresholds 3, 4, 6, and 8, as discussed previously in Section 4.7.1.2, Existing Conditions, the Project is not located within ¼-mile of an existing or proposed school, is not located on an agency-listed hazardous materials site that could result in a significant hazard to the public or the environment, is not on or in the vicinity of a private airstrip, and is not within an area where wildland fires pose a significant risk of loss, injury, or death. Therefore, no further discussion of the Project's impacts related to these thresholds of significance is warranted in this Draft EIR.

4.7.3 IMPACT DISCUSSION

HAZ-1	Implementation of the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
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While commercially available hazardous materials (e.g., fuels, solvents, paints, and some consumer electronics) would be used at various construction sites within the Project site and may generate small amounts of hazardous waste, the waste would be handled in accordance with applicable federal, State, and local laws, policies, and regulations, as described in Section 4.7.1.1, Regulatory Framework. As a general matter, the Project contains office, commercial, recreational and residential land uses and, therefore, would not include manufacturing or research processes that generate substantial quantities of hazardous materials. The City of San Leandro Environmental Services Section and Building and Safety Division coordinate the review of building permits to ensure that hazardous materials requirements are met prior to construction, including required separation between hazardous materials and sensitive land uses, and proper hazardous materials storage facilities. Any businesses that transport, generate, use, and/or dispose of hazardous materials within the Project site would also be subject to existing hazardous materials regulations, such as those implemented by the Environmental Services Section, and hazardous materials permits from the Environmental Services Section. In addition, the San Leandro General Plan contains many and detailed policies and strategies, as also described in Table 4.7.1 in Section 4.7.1.1, that further ensures that new development would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Removal of any permitted USTs would require a permit from the City's Environmental Services Section. As a condition of the permit, soil sampling would be required at the time of UST removal. If the samples were clean, a no further action (NFA) determination would be forthcoming from the City's Environmental Services Section. If the samples are determined to be dirty, indicating a product release, the City's Environmental Services Section would require an investigation to delineate the extent of impacted soil and to determine if underlying groundwater similarly has been impacted. Based on the results of the investigation, soil cleanup may be required. If groundwater has been impacted, the City's Environmental Services Section may require further investigation and possibly cleanup or they may refer case to the RWQCB. The RWQCB in turn may require further investigation and possibly cleanup. The goal of the City's

HAZARDS AND HAZARDOUS MATERIALS

Environmental Services Section and/or the RWQCB would be to ensure adequate investigation and cleanup have been undertaken such that the site does not pose a significant risk to human health or the environment.

The risks, therefore, associated with release of hazardous materials into the environment from the routine transport, use, storage, or disposal of hazardous materials following construction would be *less-than-significant*.

Significance Before Mitigation: Less than significant.

HAZ-2	Implementation of the 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.
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The Project would facilitate new development, including residential, mixed-use, recreational and commercial uses within the Project site. Demolition of existing structures, including wood and concrete docks, numerous buildings, etc., could potentially result in release of hazardous building materials (e.g., asbestos, lead paint, etc.) into the environment. Use of hazardous materials on newly developed properties after construction could potentially include cleaning solvents, fertilizers, pesticides, and other materials used in the regular maintenance and operation of the proposed uses. Compliance with applicable federal, State, and local laws and regulations regarding handling of these materials described in Section 4.7.1.1, Regulatory Framework, of this chapter, would ensure that potential impacts associated with a reasonably foreseeable upset or accidental release of hazardous materials into the environment would be *less-than-significant*.

Significance Before Mitigation: Less than significant.

HAZ-5	Implementation of the Project within 2 miles of a public airport would not result in a safety hazard for people residing or working in the Project area.
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The Oakland International Airport is located less than two miles northwest of the Project site. As discussed in Section 4.7.1.1, Regulatory Framework, of this chapter, the Project site and its proposed development are within the jurisdiction of ALUC's ALUCP. Compliance with the ALUCP requirements (see Chapter 4.9, Land Use, Regulatory Framework, for additional details) would ensure that implementation of the Project would not result in a safety hazard for people residing or working in the vicinity of the Project. In addition, the San Leandro General Plan contains many and detailed policies and actions, as described in Table 4.7.1 in Section 4.7.1.1, that would not result in a safety hazard for people residing or working in the vicinity of the Project site.

The Project does not propose the removal or modification of the existing boat launch ramp on Pescador Point. As a result, ACFD's ability to launch rescue boats from the Project site would not be affected.

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Compliance with applicable federal, State, and local laws and regulations regarding air navigation hazards, as described in Section 4.7.1.1, Regulatory Framework, of this chapter, would ensure the associated risks with people residing and working in the vicinity of the Project site would be *less-than-significant*.

Significance Before Mitigation: Less than significant.

HAZ-7	Implementation of the Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.
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Construction of the Project would result in changes to current circulation through the site for emergency vehicles, cars, buses, bicycles, and pedestrians. The Project proposes to use Marina Boulevard, with direct access to Interstate 880, Monarch Bay Drive, and Fairway Drive to provide access to the Project Site. As described in Chapter 4.13, Transportation and Traffic, the Marina Boulevard interchange at Interstate 880 is planned to be reconfigured and signalized at both northbound and southbound ramps, and Fairway Drive would be widened to three lanes from Merced Street to Miller Street. The existing roadways within the Project site, Mulford Point Drive and Pescador Point, also will be reconfigured. However, no physical components that would interfere with the ability to implement emergency response are proposed. Project plans will include fire and emergency access through all phases of construction and operation.

Compliance with provisions of the 2014 California Fire Code and the 2014 California Building Code would ensure that buildout of the Project would not interfere with an adopted emergency response plan or emergency evacuation plan. In addition, the San Leandro General Plan contains policies and actions that further ensures that new development would not conflict with emergency operations in the vicinity of the Project site.

Compliance with applicable federal, State, and local laws and regulations regarding emergency preparedness, as described in Section 4.7.1.1, Regulatory Framework, of this chapter, would ensure future development under the Project would not interfere with an adopted emergency response plan or emergency evacuation plan, such as the Multi-Hazard Mitigation Plan, and impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

4.7.4 CUMULATIVE IMPACT DISCUSSION

HAZ-9	Implementation of the Project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to hazards and hazardous materials.
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With respect to hazardous materials in the environment, effects are generally limited to site-specific conditions due to the fact that exposure typically is dependent on proximity to the source of the hazardous material. An exception to this precept would be contaminant groundwater plumes resulting from multiple sources and underlying larger areas. However, as discussed previously in section 4.7.1.2, Existing Conditions, none of the four major groundwater plumes in San Leandro lies beneath or in close

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proximity of the Project. The geographic scope for cumulative impacts associated with hazards and hazardous materials, therefore, encompasses the Project site and immediate vicinity.

The cumulative analysis discussions contained in Chapters 4.1 through 4.14 include discussions of growth projections and reference specific projects as to their relevance to impact analyses. Past, present, and reasonably foreseeable projects in the area around the Project site are summarized in Chapter 4, Table 4-1, Cumulative Project List, and include several residential developments, an office development, improvements to the Davis Street Transfer Station, warehouse distribution building, and additions to existing packaging and manufacturing facilities. Potential projects include a future Bay Fair Transit Village, and two residential mixed-use developments. Development of these cumulative projects would involve increased storage, use, and disposal of common cleaning substances, building maintenance products, paints and solvents; however, these potentially hazardous materials would not be of a type or occur in sufficient quantities to pose a significant hazard to public health and safety or the environment. While cumulative development in the vicinity of the Project site would bring more residents into the area, compliance with existing federal, State, local regulations and standards, and the San Leandro General Plan policies listed in Section 4.7.1.1 of this chapter would ensure that risks associated with the transport, storage, use, and disposal of hazardous materials and waste would be *less than significant*.

As discussed previously, development of the Project would not result in significant impacts from the increased use of hazardous household materials and would not increase exposure to potential hazards associated with wildland fires. The Project would not interfere with implementation of emergency response plans. In addition, potential project-level impacts associated with hazards and hazardous materials would be less than significant through compliance with local, regional, State, and federal regulations, all of which apply to other new development as well. Consequently, construction of the Project in combination with past, present, and reasonably foreseeable projects in the near vicinity would not result in a significant cumulative impact.

Significance Before Mitigation: Less than significant.

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HYDROLOGY AND WATER QUALITY

4.8 HYDROLOGY AND WATER QUALITY

This chapter discusses the regulatory framework, existing conditions, and impacts of the proposed Project related to hydrology and water quality.

4.8.1 ENVIRONMENTAL SETTING

4.8.1.1 REGULATORY FRAMEWORK

This section summarizes key federal, State, regional and local policies and regulations pertaining to hydrology and water quality that are applicable to the proposed Project.

Federal Regulations

Clean Water Act

The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (codified at 33 U.S.C. Sections 1251-1376) of 1972 is the primary federal law that governs and authorizes water quality control activities by the EPA, as well as the states. Various elements of the Clean Water Act address water quality, and they are discussed below.

Permits to dredge or fill waters of the United States are administered by the U.S. Army Corps of Engineers (Army Corps) under Section 404 of the Clean Water Act. “Waters of the United States” are defined as all waters subject to the ebb and flow of the tide (which includes harbors), interstate waters, water impoundments, streams, rivers, and wetlands. The regulatory branch of the Army Corps is responsible for implementing and enforcing Section 404 of the Clean Water Act and issuing permits. Any activity that discharges fill material and/or requires excavation in waters of the United States must obtain a Section 404 permit. Before issuing the permit, the Army Corps requires that an analysis be conducted to demonstrate that the proposed project is the least environmentally damaging practicable alternative. Also, the Army Corps is required to comply with the National Environmental Protection Act (NEPA) before it may issue an individual Section 404 permit.

Under Section 401 of the Clean Water Act, every applicant for a Section 404 permit that may result in a discharge to a water body must first obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. Certifications are issued in conjunction with Army Corps Section 404 permits for dredge and fill discharges. In addition, a Water Quality Certification must be sought for any activity that would result in the placement of structures in waters of the United States that are not jurisdictional to the Army Corps, such as isolated wetlands, to ensure that the proposed activity complies with State water quality standards. In California, the authority to either grant water quality certification or waive the requirement is delegated by the State Water Resources Control Board (SWRCB) to its nine Regional Water Quality Control Boards (RWQCBs).

Under federal law, the EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (40 CFR). Section 303 of the Clean Water Act requires states to adopt water quality standards for all surface waters of the United States. As defined by the Clean Water Act, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2)

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criteria that protect the designated uses. Section 304(a) requires the EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and 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 EPA has designated the SWRCB and its RWQCBs with authority to identify beneficial uses and adopt applicable water quality objectives.

When water quality does not meet Clean Water Act 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 (TMDL) must be developed for the impairing pollutant(s). A TMDL 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 TMDL allocates the loads among current and future pollutant sources to the water body. In the vicinity of the Project site, Lower San Francisco Bay is listed as a Section 303(d) impaired water body.¹

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established by the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems (MS4s). 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.

Under the NPDES Program, all facilities which discharge pollutants into waters of the US are required to obtain an NPDES permit. Requirements for storm water discharges are also regulated under this program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs. The City of San Leandro lies within the jurisdiction of San Francisco RWQCB (Region 2) and is subject to the waste discharge requirements of the Municipal Regional Stormwater Permit (Order No. R2-2009-0074) and NPDES Permit No. CAS612008, as amended by Order No. R2-2011-0083 in 2011. The Alameda County permittees include Alameda County, the Alameda County Flood Control and Water Conservation District, and 14 cities, including San Leandro. The current Municipal Regional Stormwater Permit (MRP) will expire at the end of 2014 and a new permit is due to be reissued in 2015.

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 to address both soluble and insoluble stormwater runoff pollutant discharges and prevent

¹ State Water Resources Control Board (SWRCB), 2010. *Final Integrated Report (CWA Section 303(d) List/305(b) Report*. http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/category5_report.shtml accessed August 1, 2014.

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increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains.² FEMA also issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year.

Additionally, FEMA has developed requirements and procedures for evaluating earthen levee systems and mapping the areas affected by those systems.³ Levee systems are evaluated for their ability to provide protection from 100-year flood events and the results of this evaluation are documented in the FEMA Levee Inventory System (FLIS). Levee systems must meet minimum freeboard standards and must be maintained according to an officially adopted maintenance plan. Other FEMA levee system evaluation criteria include structural design and interior drainage.

Minimum NFIP floodplain management building requirements are applicable to some portions of the Project site per Title 44 Code of Federal Regulations, Sections 59 through 65. The portion of the project west of Monarch Bay Drive and just north of the existing boat launch is located in a Special Flood Hazard Zone VE, which is defined as a coastal flood zone where base flood wave heights are 3 feet or greater, or where other damaging base flood wave effects have been identified.⁴ The project areas east of Monarch Bay Drive are outside of the 100-year floodplain. As required by the FEMA regulations, all development constructed within the Special Flood Hazard Zone (as delineated on the FIRM) must be elevated so that the lowest floor is at or above the base flood elevation level. The term "development" is defined by FEMA as any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials. Per these regulations, if development in these areas occurs, a hydrologic and hydraulic analysis must be performed prior to the start of development, and must demonstrate that the development does not cause any rise in base flood elevation levels, as no rise is permitted within regulatory floodways. Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision, as soon as practicable, but not later than six months after such data becomes available.

FEMA is currently conducting a new coastal study called the California Coastal Analysis and Mapping Program (CCAMP) that will revise and update flood and wave data for San Francisco Bay and its estuaries.

² Federal Emergency Management Agency (FEMA), <http://www.fema.gov/hazard/flood/index.shtm>, accessed August 1, 2014.

³ Federal Emergency Management Agency (FEMA), 2003, Guidelines and Specifications for Flood Hazard Mapping Partners, <http://www.fema.gov/library/viewRecord.do?id=2206>, accessed August 1, 2014.

⁴ Federal Emergency Management Agency (FEMA), 2014. FEMA FIRM Panel Nos. 06001C0254G and 06001C0258G, dated August 3, 2009, <https://msc.fema.gov/portal/search?AddressQuery=San%20Leandro%2C%20CA>, accessed October 20, 2014.

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The analyses rely on a combination of hydrodynamic models and wave models to calculate elevated still water levels (SWELs), wave heights, and overland wave propagation that will be used to produce updated FIRM panels. These analyses along with local topographic data will be used to evaluate the location and extent of Special Flood Hazard Areas (SFHAs) and base flood elevations (BFEs). The preliminary maps will be produced in 2015.⁵ However, a preliminary map provided by FEMA shows the portion of the project south of Pescador Point Drive would be eliminated from the 100-year floodplain but the areas east of Monarch Bay Drive would be within the 100-year floodplain.⁶

Rivers and Harbors Act of 1899

Under the Rivers and Harbors Act of 1899, the Army Corps requires permits for activities involving the obstruction of the navigable capacity of any waters of the United States or the construction of any structures in or over navigable waters of the United States, including ports, canals, navigable rivers or other waters. “Navigable waters” under Section 10 of the Rivers and Harbors Act are defined as “those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high water mark and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce.” Pursuant to Section 10 of the Rivers and Harbors Act, the Army Corps administers this regulatory program separate from the Section 404 program. A Section 10 permit may be required for structures or work outside the limits of navigable waters if the structure or work affects the course, location, condition, or capacity of the water body.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) provides the basic authority for the U.S. Fish and Wildlife Service (FWS) to evaluate impacts to fish and wildlife from proposed water resource development projects. This Act requires that all federal agencies consult with the FWS, the National Marine Fisheries Service, and State wildlife agencies (i.e., the California Department of Fish and Wildlife) for activities that affect, control, or modify waters of any stream or bodies of water. Under the Act, the FWS has responsibility for reviewing and commenting on all water resources projects. For example, the FWS would provide consultation to the Army Corps with regard to issuance of a Section 404 permit.

If a project may result in the “incidental take” of a listed species, an incidental take permit is required. An incidental take permit allows a developer to proceed with an activity that is legal in all other respects but that results in the “incidental taking” of a listed species. A Habitat Conservation Plan (HCP) must also accompany an application for an incidental take permit. The purpose of the HCP is to ensure that the effects of the permitted action on listed species are adequately minimized and mitigated.

⁵ Federal Emergency Management Agency (FEMA), 2014. *Northern Alameda County, California. San Francisco Bay Area Coastal Study*, March.

⁶ Email correspondence between FEMA, Alameda County, and the City of San Leandro in December 2013 and preliminary FIRM maps provided by FEMA.

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State Regulations

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. The act established the SWRCB and divided the state into nine regional basins, each under the jurisdiction of a RWQCB. The SWRCB is the primary state agency responsible for the protection of California's water quality and groundwater supplies. The RWQCBs carry 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 ground and surface water, and local water quality conditions and problems. As described above, San Leandro is within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

The Porter-Cologne Act also authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, Section 401 water quality certifications, or other approvals. Other State agencies with jurisdiction over water quality regulation in California include the California Department of Health Services (DHS) for drinking water regulations, the California Department of Fish and Wildlife (CDFW) and the Office of Environmental Health and Hazard Assessment (OEHHA).

State Water Resources Control Board (SWRCB) General Construction Permit

In California, the SWRCB has broad authority over water quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the CWA.

Construction activities that disturb one or more acres of land that could impact hydrologic resources must comply with the requirements of the SWRCB Construction General Permit (2009-0009-DWQ) as amended by 2010-0014-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, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are now submitted electronically to the SWRCB via the Storm Water Multiple Application and Report Tracking System (SMARTS) website.

Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a Storm Water Pollution Prevention Plan (SWPPP), containing 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 site. The SWPPP must list BMPs 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 BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Some sites also require implementation of a Rain Event Action Plan (REAP). The updated Construction General Permit (2010-0014-DWQ), effective on September 2, 2012 also requires applicants to comply with post-construction runoff reduction requirements.

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California Coastal Act of 1976

The California Coastal Act of 1976 established three designated coastal management agencies to plan and regulate the use of land and water in the coastal zone: the California Coastal Commission, the San Francisco Bay Conservation and Development Commission, and the California Coastal Conservancy. Under California's federally approved Coastal Management Program, the California Coastal Commission manages development along the California coast except for San Francisco Bay, while the San Francisco Bay Conservation and Development Commission oversees development. The mission of the California Coastal Conservancy is to purchase, protect, restore, and enhance coastal resources and provide shoreline access. Additional information on the San Francisco Bay Conservation and Development Commission, which has jurisdiction for projects in and around San Francisco Bay, is discussed in the Local Regulations section.

State Updated Model Water Efficient Landscape Ordinance (Assembly Bill 1881)

The updated Model Water Efficient Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Water Efficient Landscape Ordinance (WELO). The City of San Leandro adopted the Bay-Friendly Landscape Ordinance in accordance with AB1881. The ordinance incorporates landscape protocols developed by the Alameda County Waste Management Authority (StopWaste) and all parameters in the WELO. The ordinance became effective as of February 1, 2010.

Local Regulations

San Francisco Bay Regional Water Quality Control Board

Regional authority for planning, permitting, and enforcement is delegated to the nine Regional Water Quality Control Boards (RWQCBs). The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. San Leandro is within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

The San Francisco Bay RWQCB addresses region-wide water quality issues through the creation of the Water Quality Control Plan for San Francisco Bay Basin (Basin Plan). The Basin Plan was updated most recently in June 2013. This Basin Plan designates beneficial uses of the State waters within Region 2, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan.⁷ The *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*, as adopted by the SWRCB in 1995, also provides water quality principles and guidelines to prevent water quality degradation and protect the beneficial uses of waters of enclosed bays and estuaries.⁸

⁷ San Francisco Bay RWQCB, 2013. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*. Latest revision June 29, 2013.

⁸ State Water Resources Control Board, 1995. *Water Quality Control Policy for the Enclosed Bays and Estuaries of California, as Adopted by Resolution No. 95-84 on November 16, 1995*.

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Bay Protection and Toxic Cleanup Program

In 1989, the California legislature established the Bay Protection and Toxic Cleanup Program with the goal of protecting present and future beneficial uses of the Bay and estuarine waters of California. In addition, the program was tasked with identifying toxic hot spots (i.e., localized areas with elevated concentrations of pollutants) and developing prevention and control strategies to remediate the toxic hot spots. As part of this program in 1993, the San Francisco Bay RWQCB initiated the Regional Monitoring Program (RMP), which includes water quality monitoring near the Project site. The purpose of the program is to assess regional water quality conditions, characterize patterns and trends of contaminant concentrations and distribution in the water column, and identify general sources of contamination to San Francisco Bay. The program has established a database of water quality and sediment quality in the Bay, particularly with respect to trace elements and organic contaminants.

San Francisco Bay Conservation and Development Commission (BCDC)

The California Coastal commission carries out its mandate locally through the San Francisco Bay Area Conservation and Development Commission (BCDC). BCDC's jurisdiction for San Francisco Bay includes all sloughs, marshlands between mean high tide and five feet above mean sea levels, tidelands, submerged lands, and land within 100 feet of the Bay shoreline. The precise boundaries are determined by BCDC upon request. For planning purposes, BCDC assumes that projects have a lifespan of at least 50 to 90 years.⁹

Since the issuance of the Governor's Executive Order S-13-08 on November 2008, BCDC has followed other Natural Resource Agencies in planning for two sea level rise scenarios: 16 inches by mid-century and 55 inches by the end of the century. In April 2009, BCDC published its report with maps indicating zones that could be flooded due to sea level rise and that were based on existing elevations.¹⁰ In May 2011, BCDC published a revised draft of its proposed amendments to its master planning document, the *Bay Plan*. This received considerable public review and environmental review, and was adopted on October 6, 2011.^{11,12} These amendments include revised findings and policies to adapt to the effects of sea level rise.

As a permitting authority along the San Francisco Bay shoreline, BCDC is responsible for granting or denying permits for any proposed fill, extraction of materials, or change in the use of any water, land, or structure within BCDC's jurisdiction. Their jurisdiction extends from all tidally influenced portions of the site up to the Mean High Tide and then continuing up to 100-foot inland. Therefore, BCDC would have jurisdiction for most of the proposed project west of Monarch Bay Drive. A permit from BCDC is required

⁹ Bay Area Conservation and Development Commission (BCDC), 2011. *San Francisco Bay Plan*, http://www.bcdc.ca.gov/laws_plans/plans/sfbay_plan.shtml, accessed August 1, 2014.

¹⁰ Bay Area Conservation and Development Commission (BCDC), 2009. *Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline*.

¹¹ Bay Area Conservation and Development Commission (BCDC), 2011. *Staff Report, Revised Preliminary Recommendation and Environmental Assessment for Proposed Bay Plan Amendment No. 1-08 Concerning Climate Change*. (For Commission consideration on September 1, 2011.)

¹² Bay Area Conservation and Development Commission (BCDC), 2011. Resolution No. 11-08. Adoption of Bay Plan Amendment No. 1-08 Adding New Climate Change Findings and Policies to the Bay Plan; And Revising the Bay Plan Tidal Marsh and Tidal Flats; Safety of Fills; Protection of the Shoreline; and Public Access Findings and Policies. Adopted October 6, 2011. Online at http://www.bcdc.ca.gov/proposed_bay_plan/10-01Resolution.pdf.

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for any Bay filling or dredging, which includes piers, pilings, and floating structures moored in the Bay for extended periods. A permit from BCDC would be required before proceeding with shoreline development. Permits may be granted or denied only after public hearings and after the process for review and comment by the City and County has been completed. BCDC will approve the permit if it is determined that the project is in accordance with defined standards for use of the shoreline, provisions for public access, and advisory review of appearance.

Projects in BCDC jurisdiction that involve Bay fill must be consistent with the Bay Plan policies on the safety of fills and shoreline protection. Land elevation changes caused by tectonic activity or consolidation/compaction of soft soils, such as Bay muds, is variable around the Bay. Consequently, some parts of the Bay may experience a greater relative rise in sea level than other areas. According to BCDC policies, new projects on fill or near the shoreline should either be set back from the edge of the shore so that the project will not be subject to dynamic wave energy, be built so the bottom floor level of structures will be above a 100-year flood elevation that takes future sea level rise into account for the expected life of the project, be specifically designed to tolerate periodic flooding, or employ other effective means of addressing the impacts of future sea level rise and storm activity.

Alameda County Flood Control & Water Conservation District

The Alameda County Flood Control and Water Conservation District (ACFCD) is a division of the Alameda County Public Works Agency that develops and maintains flood control systems for the public safety, health, and welfare of Alameda County residents and businesses.¹³ Additionally, the ACFCD enforces pollution control regulations governing County waterways.

The ACFCD is in the process of issuing a Hydrology and Hydraulics Manual that will outline the District's requirements for new developments and modification of existing flood control systems in western Alameda County. The ACFCD requires that primary drainage systems (between 50 acres and 10 square miles) be evaluated for two design storms. The system must convey the five-year storm when using the 100-year tide level of 7.6 feet above sea level (National Geodetic Vertical Datum [NGVD] 29) as an outlet constraint, and must convey the 100-year storm event when using the mean higher high water level of 4.4 feet above sea level (NGVD 29) as an outlet control constraint. In addition, all facilities that are part of the FEMA Flood Insurance Study must be designed to contain the FEMA 100-year storm using FEMA criteria. Where these facilities are subject to tidal backwater effects, two water surface profiles must be calculated and compared. The 100-year tide is run flat (no outflow from the channel), and the FEMA 100-year flow is run against a beginning water surface height of Mean Higher High Water. The higher of these two water surfaces controls the design. Secondary systems (drainage area less than 50 acres) are required to convey the 10-year storm event when using the higher water surface calculated for the two design storms.

Alameda County Clean Water Program (CWP)

Together with 13 other incorporated cities in Alameda County, San Leandro has joined with the Alameda County Flood Control & Water Conservation District, the Zone 7 Water Agency, and Alameda County in the

¹³ Alameda County Flood Control & Water Conservation District, About Us, <http://acffloodcontrol.org/about-the-district>, accessed August 1, 2014.

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Clean Water Program (CWP) initiative.¹⁴ Members of the program are regulated waste dischargers under the 2009 NPDES Permit issued by the San Francisco Bay RWQCB, and are responsible for municipal storm drain systems and watercourses that they own or operate. As part of the permitting process, dischargers must submit a Stormwater Management Plan that describes a framework for management of stormwater discharges during the term of the permit.

The City of San Leandro, as a co-permittee under the NPDES permit, is also subject to the Provision C.3 requirements for new development and redevelopment projects, and includes post-construction stormwater management requirements. Provision C.3 requirements are separate from, and in addition to, requirements for erosion and sediment control and for pollution prevention measures during construction. These requirements apply to all new development or redevelopment projects that create or replace 10,000 square feet of impervious surfaces and specific land use projects that create or replace 5,000 square feet of impervious surfaces (i.e., auto service facilities, retail gasoline outlets, restaurants, and/or uncovered surface parking). Project applicants are required to implement site design measures, source control measures, and stormwater treatment measures to reduce stormwater pollution during operation of the project. The permit specifies methods to calculate the required size of treatment devices.

Alameda County Watercourse Ordinance

The Alameda County Watercourse Ordinance is intended to prevent damage during flooding, control erosion and sedimentation, safeguard and preserve watercourses, and restrict the discharge of pollutants into watercourses. A watercourse is defined as any natural or man-made channel through which water flows continuously or intermittently. The ordinance controls development within and adjacent to watercourses by establishing 20-foot minimum setbacks for buildings from the top of the bank and provides the provisions for the issuance of watercourse permits. Implementation of this ordinance serves to protect surface water and groundwater from erosion, sedimentation, and sources of pollution.

San Leandro General Plan

The City of San Leandro General Plan, adopted in 2002 and updated in 2011, contains goals and policies that pertain to hydrology and water quality. The relevant goal and policies are listed in Table 4.8-1.

San Leandro Municipal Code

Four chapters of the City of San Leandro Municipal Code contain directives pertaining to hydrology and water quality issues, as explained in the following paragraphs:

- *Stormwater Management and Discharge Control – Chapter 3-15.* This chapter provides the storm water requirements for projects conducted within the City of San Leandro and is consistent with the requirements of the San Francisco RWQCB.

¹⁴ Alameda County, Stormwater Quality Control Requirements brochure, https://www.acgov.org/pwa/documents/brochure_9_05_final.pdf, accessed February 1, 2013.

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TABLE 4.8-1 SAN LEANDRO GENERAL PLAN GOAL AND POLICIES

Goal/Policy Number	Goal/Policy/Action Text
Chapter 6, Environmental Hazards	
Goal 29	Mitigation of Natural Hazards. Reduce the potential for injury, property damage and loss of life resulting from earthquakes, landslides, floods, and other natural disasters.
Policy 29.01	Risk Management. Minimize risks from geologic, seismic, and flood hazards by ensuring the appropriate location, site planning, and design of new development. The City's development review process, and its engineering and building standards, should ensure that new construction is designed to minimize the potential for damage.
Policy 29.06	Construction in the Flood Plain. Implement federal requirements relating to new construction in flood plain areas to ensure that future flood risks to life and property are minimized.
Action 29.06-A	FIRM Amendments. Continue to work with FEMA to amend and update Federal Insurance Rate Maps (FIRMs) so that they correctly depict flood hazards to the City. Continue the City's elevation verification program to assist homeowners in determining their flood zone designation and to further refine the flood plain boundaries.
Policy 29.07	Reducing Flood Hazards. Work collaboratively with County, State, and federal agencies to develop short- and long-term programs that reduce flood hazards in the City. At the local level, the City will regularly maintain its storm drain system and ensure that those portions of San Leandro Creek under its jurisdiction remain clear of obstructions.
Action 29.07-A	Coordination with ACFCWD. Improve coordination with the Alameda County Flood and Water Conservation District to ensure that flood channels are regularly cleaned and maintained.
Goal 32	Water Quality. Maintain and improve water quality in San Leandro's creeks, wetlands, and offshore waters.
Policy 32.01	Urban Runoff Control. Continue to implement water pollution control measures aimed at reducing pollution from urban runoff. These measures should emphasize best management practices by residents, businesses, contractors, and public agencies to ensure that surface water quality is maintained at levels that meet state and federal standards.
Action 32.01-A	Stormwater Pollution Prevention Plans. As required by state and federal law, require Stormwater Pollution Prevention Plans for qualifying projects and ensure that such projects include appropriate measures to minimize the potential for water pollution.
Policy 32.02	Clean Water Education. Promote the public information and participation provisions of the Alameda Countywide Clean Water Program.
Action 32.02-A	Clean Water Program Educational Components. Continue to implement programs in coordination with the Alameda County Clean Water Program to better educate the public on urban runoff hazards. Examples of these programs include storm drain stenciling, preparation of brochures and posters, website information, and television and newspaper advertising. Use these programs to increase awareness of clean water laws and the penalties associated with illicit discharges.
Policy 32.03	Interagency Coordination. Coordinate water quality planning, regulation, and monitoring with other public agencies that are involved in water resource management. Establish partnerships and task forces with these agencies and with nearby cities as needed to develop programs addressing issues that cross jurisdictional lines.
Action 32.03-A	NPDES Permit Revisions. Remain an active participant in discussions of possible revisions to state and federal clean water legislation, including revisions to the Alameda County NPDES stormwater permit.
Policy 32.04	Water Quality Monitoring. As required by federal, State, and regional programs, conduct monitoring of water quality in San Leandro waterways to evaluate the progress of local clean water programs and identify the necessary steps for improvement.
Action 32.04-A	Water Quality Monitoring Programs. Continue water quality monitoring programs in San Leandro waterways.
Policy 32.05	Public Works Maintenance. Implement City Public Works maintenance activities, including scheduled street sweeping and cleaning of storm drains and culverts, to minimize pollution from surface runoff.

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TABLE 4.8-1 SAN LEANDRO GENERAL PLAN GOAL AND POLICIES

Goal/Policy Number	Goal/Policy/Action Text
Action 32.05-A	Community Cleanups. Coordinate with community groups to develop clean-up programs for the shoreline, creeks, and flood control channels to remove debris and litter and minimize the potential for surface water pollution.
Action 32.05-B	Street Sweeping Improvements. Improve the effectiveness of the City’s street sweeping program through measures such as 1) more aggressive ticketing or towing of illegally parked cars (by the San Leandro Police Department, 2) more frequent scheduling of street sweeping, 3) better coordination with trash collection so that sweeping is not hampered by curbside trash containers and recycling bins, 4) installation of “no parking on street sweeping days” signs, and 5) increased public education about the program and the water quality benefits it provides.
Policy 32.06	Illicit Discharges. Control illicit discharges into the City’s stormwater system through inspections, compliance evaluation, enforcement programs, and tracking activities.
Policy 32.07	Pre-Treatment Requirements. Maintain and enforce pre-treatment requirements for industries as needed to minimize the discharge of potentially toxic materials into the City’s sanitary sewer system.
Policy 32.08	Hazardous Spill Response. Maintain and update hazardous spill response and cleanup programs that minimize the potential impacts of toxic spills on water quality.
Policy 32.09	Nearshore Waters. Ensure the continued improvement of nearshore waters through the regulation of water pollution sources within and around the San Leandro Marina, including boats and live-aboards.
Policy 32.10	Groundwater Protection. Protect San Leandro’s groundwater from the potentially adverse effects of urban uses. Future land uses should be managed to reduce public exposure to groundwater hazards and minimize the risk of future hazards.
Action 32.10-A	Groundwater Monitoring. Encourage continued monitoring of local groundwater by State regulatory agencies and take steps to prevent further contamination.
Policy 32.11	Impervious Surfaces. Encourage the use of porous pavement and other practices to reduce impervious surfaces and the amount of stormwater runoff from parking lots and driveways.
Chapter 8, Community Services and Facilities	
Goal 52	Infrastructure. Ensure that local water, sewer, storm drainage, and solid waste facilities are well maintained; improvements meet existing and future needs; and land use decisions are contingent on the adequacy and maintenance of such facilities.
Policy 52.01	Development Impacts. Permit new development only when infrastructure and utilities can be provided to that development without diminishing the quality of service provided to the rest of the City.
Policy 52.02	Fair Share Costs. Require future development to pay its fair share of the cost of improving the water, sewer, drainage, and other infrastructure systems needed to serve that development. Use fees and other appropriate forms of mitigation to cover the costs of upgrading public infrastructure.
Policy 52.03	Coordination. Coordinate local infrastructure planning with Alameda County Flood Control and Water Conservation District (ACFCD) to ensure that infrastructure remains adequate to serve existing and planned development.
Policy 52.06	Drainage. Require drainage improvements for new development which ensure that stormwater runoff is adequately handled both on-site and off-site and which implement state and federal clean water requirements.
Policy 52.07	Maintenance. Ensure that sufficient funding is provided for the ongoing maintenance of City-owned facilities, including streets, street lights, traffic signals, landscaping, street trees, storm drains, public buildings and other infrastructure.

Source: San Leandro General Plan, 2011.

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- *Bay-Friendly Landscaping Requirements for City Projects – Chapter 3-22.* The City of San Leandro has also adopted a Water Efficiency Landscape Ordinance in coordination with StopWaste that exceeds the State’s model ordinance in terms of water savings.
- *Floodplain Management – Chapter 7-9.* The ordinance is designed to protect human life and health, minimize expenditures for costly flood control projects, minimize the need for rescue and relief efforts, business interruptions, and damage to public facilities and utilities. The ordinance also ensures that property owners construct new and substantially improved buildings in the 100-year floodplain in accordance with the National Flood Insurance Program’s goals to protect life and property.
- *Grading, Excavations, and Fill – Chapter 7-12.* This requires projects to prepare erosion control and sedimentation control plans and drainage plans to the City Engineer for approval prior to the start of project construction. The plans will ensure that storm water from the site meets the quality standards dictated by Chapter 3-15, *Stormwater Management and Discharge Control*. The erosion and sediment control plans must be prepared in accordance with the most current “Association of Bay Area Governments (ABAG) Manual of Standards for Erosion and Sediment Control Measures” and the “Handbook for Erosion and Sediment Control.”

4.8.1.2 EXISTING CONDITIONS

Regional Hydrology

The Project is located in the San Francisco Bay Hydrologic Region, which covers approximately 4,500 square miles and encompasses 10 counties, including Alameda County.¹⁵ It corresponds with the boundaries of the San Francisco Regional Water Quality Control Board (RWQCB) Region 2 and the San Francisco Bay Area Integrated Regional Water Management (IRWM) Plan. The San Francisco Bay Hydrologic Region is a complex network of watersheds, marshes, rivers, creeks, reservoirs, and bays mostly draining into the San Francisco Bay and the Pacific Ocean.

The Project is located within the San Leandro Marina Watershed.¹⁶ Runoff within the watershed is collected through a system of underground culverts, storm drains, and engineered channels that discharge into San Francisco Bay. The Estudillo Canal Watershed is located just south of the Project site and runoff from this watershed drains into the Estudillo Canal, which ultimately discharges into San Francisco Bay. The creeks, drainage channels, and watersheds in the vicinity of the Project site are shown on Figure 4.8-1.

¹⁵ California Department of Water Resources, *California Water Plan, Update 2009, San Francisco Bay, Integrated Water Management. Bulletin 160-09, Volume 3, Regional Reports.*

¹⁶ Oakland Museum of California, Guide to San Francisco Bay Area Creeks, http://museumca.org/creeks/WholeMaps/2_Hayward%20Creek%20Map.pdf, accessed August 6, 2014.



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Source: Oakland Museum, Guide to East Creeks, 1996.

-  Watershed divide
-  Creek in natural channel
-  Engineered channel
-  Buried storm drain or culvert greater than 24"
-  Direction of flow

Figure 4.8-1
Creeks, Drainage Ways and Watersheds

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Alameda County is also divided into nine flood control zones by the Alameda County Flood Control and Water Conservation District (ACFCD); the Project site and parts of San Leandro are located within Zone 9.¹⁷ Zone 9 covers 2,482 acres and includes 14 miles of underground storm drain pipes, two miles of concrete channels, one mile of earthen channels, and less than one mile of natural and improved creeks.¹⁸ The construction, monitoring, and maintenance of the stormwater infrastructure are a joint effort between ACFCD and the San Leandro Public Works Department. The ACFCD is currently working with FEMA to identify and map coastal hazards that take into account 100-year tides, climate change, and sea level rise and provide input for the updated FIRM panels, which will delineate SFHAs and BFEs.¹⁹ The study is expected to be completed by July 2016.

Local Drainage

The City of San Leandro Department of Public Works owns and maintains 175 miles of storm drain conduits throughout the City. The City's storm drain system feeds into a larger system owned and operated by the ACFCD. This system includes the lower reaches of San Leandro and San Lorenzo Creeks, as well as a number of channels extending into San Leandro neighborhoods west of Interstate 880. The District's drainage facilities include levees, pump stations, erosion control devices, and culverts. The ACFCD maintains these facilities, including fence repair, vegetation removal, preventive maintenance of pump stations, spill prevention and cleanup, and investigation of inquiries and clean water concerns.

The City of San Leandro storm drains are maintained by the Department of Public Works. Catch basins and conduits are cleaned annually. Debris is removed from the tops of the storm drain inlets and the inside of the basins are cleaned. Prior to winter rains, City crews inspect problem flood areas and clear debris to minimize storm drain blockages. Major development proposals are reviewed to assess drainage impacts and determine appropriate mitigation measures. If appropriate, the City may require stormwater detention ponds or improvements to the City's storm drain system to ensure that runoff from new development does not degrade local creeks. These measures are related to the C.3 provisions of the Alameda County Clean Water Program.²⁰

Marina and Shoreline

Existing stormwater runoff from the two peninsulas that encircle the boat harbor is generally via sheet flow that is directed to City-maintained catch basins that discharge directly into San Francisco Bay. In the area along Mulford Point Drive near the El Torito restaurant, stormwater is also directed to catch basins that discharge into San Francisco Bay through several outfall structures.

There are two existing underground storm drain systems in the vicinity of the Marina Inn and Horatio's Restaurant that drain into the pond at the Marina Golf Course. The system in the vicinity of Horatio's

¹⁷ Alameda County Flood Control & Water Conservation District, *Report to the Community, Fiscal Years 2008 and 2009*. <http://acffloodcontrol.org/files/pdfs/acfcd2012-13report.pdf>, accessed August 6.

¹⁸ Alameda County Flood Control & Water Conservation District, 2014. *Flood Control Zone 9*, <http://acffloodcontrol.org/floodplain-management/neighborhood-zones/zone-9>, accessed August 6, 2014.

¹⁹ Alameda County Public Works Agency, 2014. *Modification No. 3 to the Agreement with DHI Water & Environment, Inc. to Perform Specialized Coastal Hazard Analysis and Mapping of Select Shoreline Areas of Alameda County*.

²⁰ Alameda County Clean Water Program, 2014. *Development Related Issues*, <http://www.cleanwaterprogram.org/business/development.html>, accessed September 2, 2014.

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Restaurant drains to the pond via an 18-inch storm drainpipe under Monarch Bay Drive, and the Marina Inn system drains to the pond via a 15-inch storm drainpipe under Monarch Bay Drive.²¹

Golf Course

Surface runoff from the Marina Golf Course drains into a pond located in the center of the golf course. The pond is used for irrigation of the golf course. The water in the pond is recharged by stormwater during wet months and supplemented by reclaimed water from the City's Water Pollution Control Plant during dry months. Excess stormwater during large storms is pumped to another pond located at the south end of the Tony Lema Golf Course, located south of the Marina Golf Course.

Upland Areas

The City of San Leandro and Alameda County's storm drain systems have several outfalls into San Francisco Bay near the Project site. One 36-inch outfall is located at the west end of Marina Boulevard. This structure receives stormwater from two storm drain systems. A 30-inch County storm drain located beneath Marina Boulevard collects runoff from Marina Boulevard and adjacent residential areas and discharges the runoff to the 36-inch outfall. Another 27-inch City storm drain is located along the east side of the Marina Golf Course and collects stormwater from West Avenue 133rd and West Avenue 134th. Due to the low elevations of these drainage areas, this system consists of a storm drain pump station located at the intersection of Monarch Bay Drive and Marina Boulevard.²²

The other storm drain system has a 60-inch storm drain outfall that discharges into San Francisco Bay at the end of Fairway Drive. The outfall connects to a 42-inch County storm drain pipe that extends up Fairway Drive and drains a large area east and northeast of the Project site. Drainage from several 12-inch City storm drains beneath Marina Park and Tony Lema Golf Course also connect to this outfall. Due to the low elevations of the drainage area, this system consists of a storm drain pump station located on Fairway Drive approximately 650 feet east of Monarch Bay Drive.²³

There also are five outfalls along Mulford Point Drive that direct runoff from the road and parking lots into San Leandro Marina and one outfall west of Monarch Bay Drive that directs runoff from the parking lot into San Francisco Bay.²⁴

Water Quality

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Non-point source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas.

²¹ City of San Leandro, Department of Public Works, 1968. Marina Storm Drainage, Map No. 440-C-1506.

²² City of San Leandro, Department of Public Works, 1968. Marina Storm Drainage, Map No. 440-C-1506.

²³ City of San Leandro, Department of Public Works, 1968. Fairway Storm Drainage, Map No. 440-C-1512.

²⁴ City of San Leandro, GIS, 2013. Storm Map printed on June 27, 2013.

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Stormwater runoff pollutants vary with land use, topography, and the amount of impervious surface, as well as the amount and frequency of rainfall and irrigation practices. Runoff in developed areas typically contain oil, grease, litter, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the “first flush.”

All stormwater runoff from various portions of the proposed Project would discharge into San Francisco Bay. The San Francisco Bay RWQCB monitors surface water quality through implementation of the Water Quality Control Plan (Basin Plan) and designates beneficial uses for surface water bodies and groundwater. The beneficial uses for San Francisco Bay include industrial service supply, commercial and sport fishing, shellfish harvesting, estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, wildlife habitat, water contact recreation, water non-contact recreation, and navigation.²⁵

In addition to the establishment of beneficial uses and water quality objectives, another approach to improve water quality is a watershed-based methodology that focuses on all potential pollution sources and not just those associated with point sources. If a body of water does not meet established water quality standards under traditional point source controls, then it is listed as an impaired water body under Section 303(d) of the Clean Water Act. For 303(d) listed water bodies, a limit is established, which defines the maximum amount of pollutants (or Total Maximum Daily Load – TMDL) that can be received by that water body. South San Francisco Bay is listed as an impaired water body near the Project site and stormwater runoff from the project would discharge into this water body. The list of 303(d) pollutants in San Francisco Bay and the status of TMDL implementation are provided in Table 4.8-2.

As discussed previously, the San Francisco Bay RWQCB has initiated the Regional Monitoring Program to assess water quality conditions in the Bay and has established a database of water quality sampling results. The nearest monitoring station (CB022W) is approximately 1.5 miles east of the Project site. The most recent water quality sampling was conducted in 2007, which carried out analysis for conventional water quality parameters (conductivity, dissolved oxygen, hardness, nitrates, pH, salinity, and suspended solids, among others), trace elements (including mercury and methylmercury), trace organics (including polyaromatic hydrocarbons [PAHs], polychlorinated biphenyls [PCBs], phthalates, polybrominated diphenyl ethers, and pesticides), and toxicity. The results indicated that water quality conditions at these locations were well within the water quality objectives established by the RWQCB for the monitored parameters.

Groundwater

Given the Project site’s close proximity to the Bay tidal waters, groundwater aquifers beneath the Project site are shallow, and tidally influenced in elevation and water quality. Deep aquifers are also present.

²⁵ San Francisco Regional Water Quality Control Board (RWQCB), 2013. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*.

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TABLE 4.8-2 SECTION 303(D) LIST OF IMPAIRED WATER BODIES IN VICINITY OF PROJECT SITE

Water Body	Pollutant	Potential Source	Status of TMDL
South San Francisco Bay	Chlordane	Nonpoint source	Planned (2013)
	DDT	Nonpoint source	Planned (2013)
	Dieldrin	Nonpoint source	Planned (2013)
	Dioxin compounds	Atmospheric deposition	Planned (2019)
	Furan compounds	Atmospheric deposition	Planned (2019)
	Invasive species	Ballast water	Planned (2019)
	Furan compounds	Atmospheric deposition	Planned (2019)
	Mercury	Industrial and municipal point sources; resource extraction; atmospheric deposition; natural sources; nonpoint sources	Approved (2008)
	PCBs	Unknown nonpoint sources	Approved (2010)
	Trash	Illegal dumping; urban runoff/storm sewers	Planned (2021)

Source: State Water Resources Control Board. *2010 Integrated Report, Clean Water Act, Section 303(d) List*, Accessed on August 6, 2014, http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

The Project site is located within the East Bay Plain subbasin of the Santa Clara Valley Groundwater Basin.²⁶ The East Bay Plain sub-basin is bounded on the north by San Pablo Bay, on the east by Franciscan Basement rock, and on the south by the Niles Cone Groundwater Basin. It extends beneath San Francisco Bay to the west. Numerous creeks including San Leandro Creek, flow from the western slope of the Diablo Range westward across the plain into San Francisco Bay. The shallow aquifer is close to the surface near the Project site, approximately 5 feet below ground surface (bgs). Shallow groundwater in San Leandro generally flows to the west. The deep aquifer is located approximately 250 feet or more bgs.

There are approximately 900 registered groundwater wells in San Leandro.²⁷ Most are used for industrial purposes or water quality monitoring; however, there are several wells on residential properties that are used for irrigation purposes. The ACFCD has jurisdiction for the installation, construction, and monitoring of these groundwater wells and maintains records at their offices. Domestic use of groundwater wells in San Leandro is currently not permitted due to contamination by volatile organic compounds (VOCs), gasoline, and heavy metals. There are four major groundwater plumes in San Leandro that are now undergoing site characterization and/or remediation. The nearest plume to the Project site, known as the San Leandro Plume, is approximately one mile east of the Project area.²⁸ Additional information on the plumes can be found in Chapter 4.7, *Hazards and Hazardous Materials*, of this Draft EIR.

²⁶ California Department of Water Resources, *California's Groundwater: Bulletin 118*, http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/2-9.01.pdf, accessed August 6, 2014.

²⁷ City of San Leandro, 2011. *San Leandro General Plan Update, Draft Environmental Impact Report. Water Quality*.

²⁸ ESA, 2007. *San Leandro Marina Opportunities and Constraints Analysis*, November.

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Flooding

FEMA determines floodplain zones in an effort to assist cities in mitigating flooding hazards through land use planning. FEMA also outlines specific regulations for any construction within a 100-year floodplain. The 100-year floodplain is defined as an area that has a one percent chance of being inundated during a 12-month period. FEMA also prepares maps for 500-year floods, which mean that in any given year, the risk of flooding in the designated area is 0.2 percent.

In some locations, FEMA also provides measurements of base flood elevations for the 100-year flood, which is the minimum height of the flood waters during a 100-year event. Base flood elevation is reported in feet above sea level. Depth of flooding is determined by subtracting the land's height above sea level from the base flood elevation. Areas within the 100-year flood hazard area that are financed by Federally-backed mortgages are subject to mandatory federal insurance requirements and building standards to reduce flood damage.

According to FEMA Flood Insurance Rate Map (FIRM) Nos. 06001C0254G and 06001C0258G dated August 3, 2009, a small portion of the Project site is within the 100-year floodplain (Zone VE). A map of the Project Area and the 100-year and 500-year floodplains is shown on Figure 4.8-2. The 100-year flood zone is also known as a Special Flood Hazard Area (SFHA); homeowners with mortgages within the SFHA are required to be protected by flood insurance. Zone VE is defined as a coastal high hazard area, which extends offshore to the inland limit that is subject to high-velocity wave action. The boundary of Zone VE is generally based on wave heights (3 feet or greater) or wave run-up depths (3 feet or greater).

The area south of Pescador Point Drive is the only portion of the Project within the 100-year floodplain of SFHA. The rest of the Project, including the peninsulas that encircle the boat harbor and the landside portions of the Project on the Marina Golf Course are either in the 500-year floodplain or in Zone X (minimal risk hazard), where flood insurance is not required.

FEMA is performing detailed coastal engineering analyses and mapping of the San Francisco Bay shoreline within nine adjoining counties, including Alameda County.²⁹ The analyses and mapping will revise and update flood and wave data for the Alameda County Flood Insurance Study report and will result in updated FIRM panels, revised SFHAs, and Base Flood Elevations (BFEs). Preliminary FIRMs have been developed for San Leandro that include the project site, as shown on Figure 4.8-3. The preliminary FIRM shows that the area south of Pescador Point Drive would be outside of the 100-year flood zone but the areas of the project site east of Monarch Bay Drive would be within the 100-year floodplain. This is due to inadequate height of the levee on the north bank of San Leandro Creek that could cause flooding to properties north of the creek during severe weather events.

²⁹ Federal Emergency Management Agency (FEMA), 2014. *Region IX National Flood Insurance Program, Risk Mapping, Assessment, and Planning, San Francisco Bay Area Coastal Study, Alameda, California*. Website <http://www.r9map.org/Pages/ProjectDetailsPage.aspx?choLoco=1&choProj=183>, accessed November 3, 2014.



100-year Floodplain



500-year Floodplain



Project Boundary

Figure 4.8-2
Floodplains



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Source: Esri, HERE, DeLorme, Intermap, TomTom, USGS, METI/NASA, USDA, EPA | FEMA.



Figure 4.8-3
Preliminary Flood Insurance Rate Map

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The Alameda County Public Works Agency and the City of San Leandro are working together on actions that will remove approximately 1,000 properties in the City from the 100-year floodplain designation, as shown in the preliminary revised FIRMs.³⁰ Actions taken by San Leandro would include increasing the elevation at the end of Davis Street to prevent flooding and meeting with the owners of Mission Bay mobile home park regarding strengthening and completing the wall on the west side of the property line adjacent to the rail line in order to remove their properties from the floodplain.

Actions taken by Alameda County would include repairing the gates and addressing the elevation of banks at Estudillo Canal from Monarch Bay Drive Bridge to Wicks Boulevard. The gate repair and elevation work would be designed to protect the Marina Faire neighborhood from flooding. Also, there are plans to acquire the right-of-way along the western property line of the low lying properties on Neptune Drive just north of Marina Boulevard and elevate the embankment of the low lying properties using material from the Estudillo Canal project to prevent flooding in the Mulford Gardens neighborhood. If these actions are approved by FEMA and the preliminary FIRMs are revised, there should be no portions of the proposed project within the 100-year floodplain.

Sea Level Rise

California Executive Order S-13-2008 states that all State agencies planning construction projects in areas vulnerable to sea level rise must consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and to the extent feasible, reduce expected risks to sea level rise.³¹ The Governor of California's Delta Vision Blue Ribbon Task Force adopted a sea level rise of 55 inches by 2100 for planning purposes. The San Francisco Bay Conservation and Development Commission (BCDC) in the latest amendment to the Bay Plan (October 2011), added new climate change findings and policies. The previous policy language recommended that new development not be approved in low-lying areas that are in danger of flooding now or in the future unless the development was elevated above possible flood levels. The new amended policies allow protection from flooding, encourage innovative means of dealing with flood danger, and make it clear that local governments will determine how best to deal with development proposals inland of BCDC's jurisdiction. The BCDC has jurisdiction to regulate new development within 100 feet inland from the Bay shoreline. This would apply to waterside portions of the Project west of Monarch Bay Drive. Local government retains its authority over development more than 100 feet inland from the Bay shoreline and the provisions of the Bay Plan do not apply outside BCDC's jurisdiction for purposes of implementing CEQA.³³

The BCDC new policies also require sea level rise risk assessments to be conducted when planning shoreline areas or designing large shoreline projects within BCDC jurisdiction. The risk assessment should be prepared by a qualified engineer and should be based on the estimated 100-year flood elevation that takes into account the best estimates of future sea level rise and current and planned flood protection. A range of sea level projections for mid-century and end of century should be used in the risk assessment

³⁰ City of San Leandro, 2014. Letter from Jerome Smith, Chief Building Official/Flood Plain Administrator to Daniel Woldensenbet, Public Works Director, Alameda County Public Works Agency dated November 6, 2014.

³¹ State of California. *Executive Order S-13-08*, <http://gov.ca.gov/news.php?id=11036>, accessed October 14, 2014.

³³ San Francisco Bay Conservation and Development Commission (BCDC). *Resolution No. 11-08: Adoption of Bay Plan Amendment Adding New Climate Change Findings and Policies to the Bay Plan*, http://www.bcdc.ca.gov/proposed_bay_plan/10-01Resolution.pdf, accessed October 14, 2014.

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and inundation maps should be prepared. The risk assessment should identify all types of potential flooding, degrees of uncertainty, consequences of defense failures, and risks to existing habitat from proposed flood protection devices. All projects should be designed to be resilient to a mid-century sea level rise projection. If it is likely that the project will remain in place longer than mid-century, an adaptive management plan should be developed to address the long-term impacts that will arise, based on the risk assessment. Shoreline protection projects, such as levees and seawalls, must be designed to withstand the effects of projected sea level rise and to be integrated with adjacent shoreline protection. Whenever feasible, projects must integrate hard shoreline protection structures with natural features, such as marsh or upland vegetation, that enhance the Bay ecosystem.³⁵

Different scenarios and models used to predict sea level rise result in different estimates in the magnitude of sea level rise. Most shoreline damage from flooding will occur as a result of storm activity in combination with higher sea levels. The key factors that contribute to coastal flooding include high tides, storm surge, high waves, and high runoff rates from rivers and creeks.³⁶

The Association of Bay Area Governments (ABAG) has produced a sea level rise scenario map for long range planning.³⁷ Figure 4.8-4 shows the projected sea level rise for the project site. The area is vulnerable to a projected sea level rise of 55 inches.

Dam Inundation

Dam failure is the uncontrolled release of impounded water behind a dam. Flooding, earthquakes, blockages, landslides, lack of maintenance, improper operation, poor construction, vandalism, and terrorism can all cause a dam to fail.³⁸ Dam failure can occur with little warning. Intense storms may produce floods in a few hours or even minutes for upstream locations and dam failure may occur within hours of the first signs of breaching. Other failures and breaches can take much longer to occur, from days to weeks. However, dam failure is a very rare occurrence. There is no historic record of dam failure in Alameda County or San Leandro.³⁹

The California Office of Emergency Services (CalOES), formally known as California Emergency Management Agency (CalEMA), is required by State law to work with State and federal agencies, dam owners and operators, municipalities, floodplain managers, planners, and the public to make available dam inundation maps.⁴⁰

³⁵ San Francisco Bay Conservation and Development Commission (BCDC), 2014. *New Sea Level Rise Policies Fact Sheet*, http://www.bcdc.ca.gov/planning/climate_change/SLRfactSheet.shtml, accessed October 15, 2014.

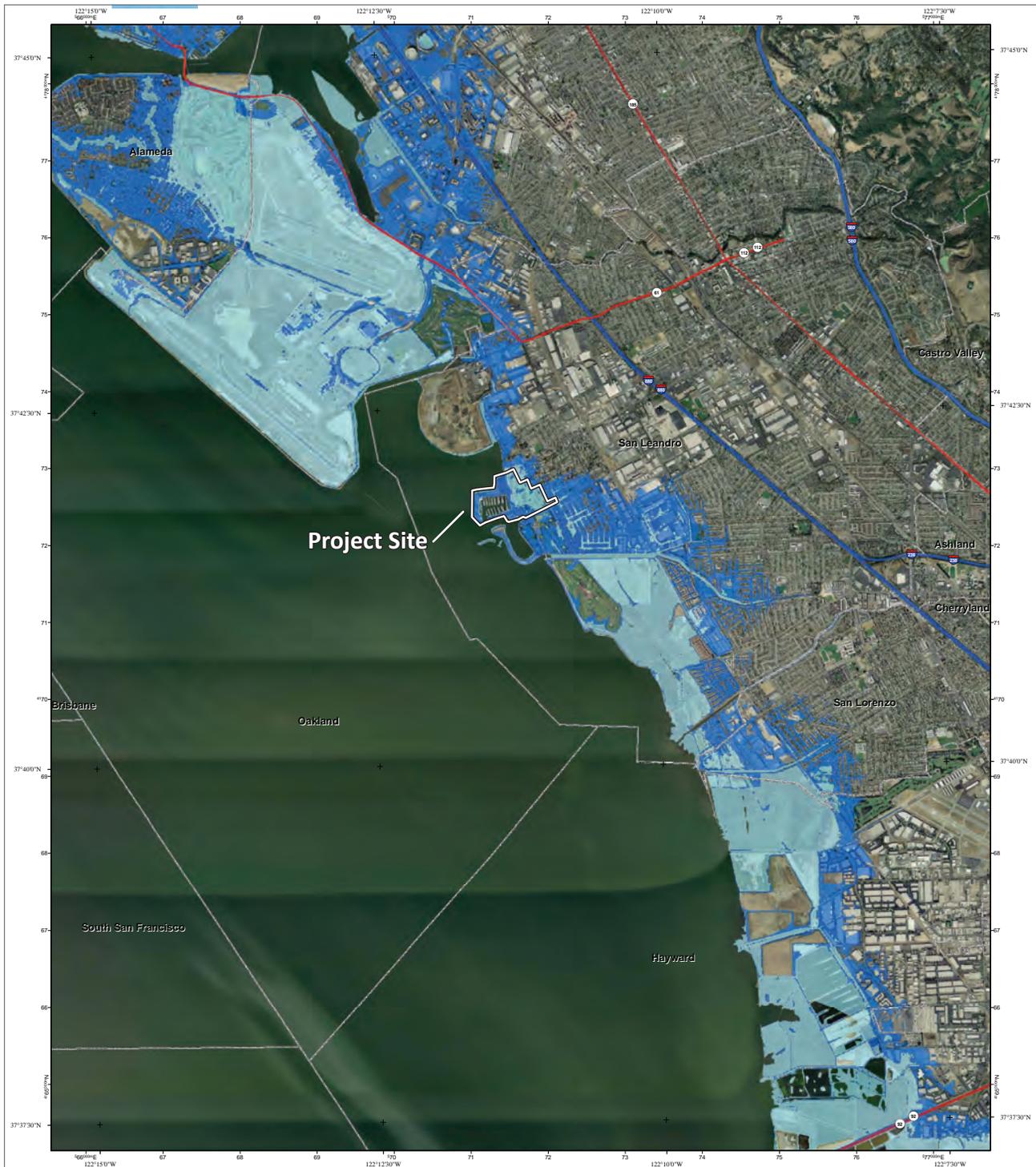
³⁶ San Francisco Bay Conservation and Development (BCDC). *Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline*, October 6, 2011.

³⁷ Association of Bay Area Governments (ABAG). *Sea Level Rise Scenario Map for Long Range Planning*, <http://quake.abag.ca.gov/searise/>, accessed April 5, 2014.

³⁸ California Emergency Management Agency (CalEMA), 2010. *State of California Multi-Hazard Mitigation Plan*.

³⁹ Alameda County, 2010. *2010 Local Hazard Mitigation Plan – Alameda County Annex*.

⁴⁰ California Emergency Management Agency (CalEMA), 2010. *State of California Multi-Hazard Mitigation Plan*



- Interstate
- US Highway
- State Highway
- County Highway
-
-
-
- Current Coastal Base Flood (approximate 100-year flood extent)
- Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
- Landward Limit of Erosion High Hazard Zone in 2100
- Coastal Zone Boundary



Figure 4.8-4
San Leandro Quad Sea Level Rise

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Dam inundation maps are used in the preparation of Local Hazard Mitigation Plans (LHMPs) and General Plan Safety Element updates. In addition, CalOES requires all dam owners to develop Emergency Action Plans (EAPs) for warning, evacuation, and post-flood actions in the event of a dam failure.

According to information obtained from the Association of Bay Area Governments (ABAG) website, the Project is located within the inundation areas of two dams: Upper San Leandro Reservoir and Lake Chabot.⁴¹ However, this information was based on 1995 data and is outdated. ABAG no longer provides dam inundation maps on their website. More current data obtained from CalOES 2009 dam inundation maps indicate that the Project site is not within the dam inundation zones of either lake, as shown on Figure 4.8-5.⁴² Lake Chabot is classified as a high hazard dam because its failure could result in a significant loss of life and property damage. The California Division of Safety of Dams (DSOD) inspects each dam on an annual basis to ensure the dam is safe, performing as intended, and is not developing problems.

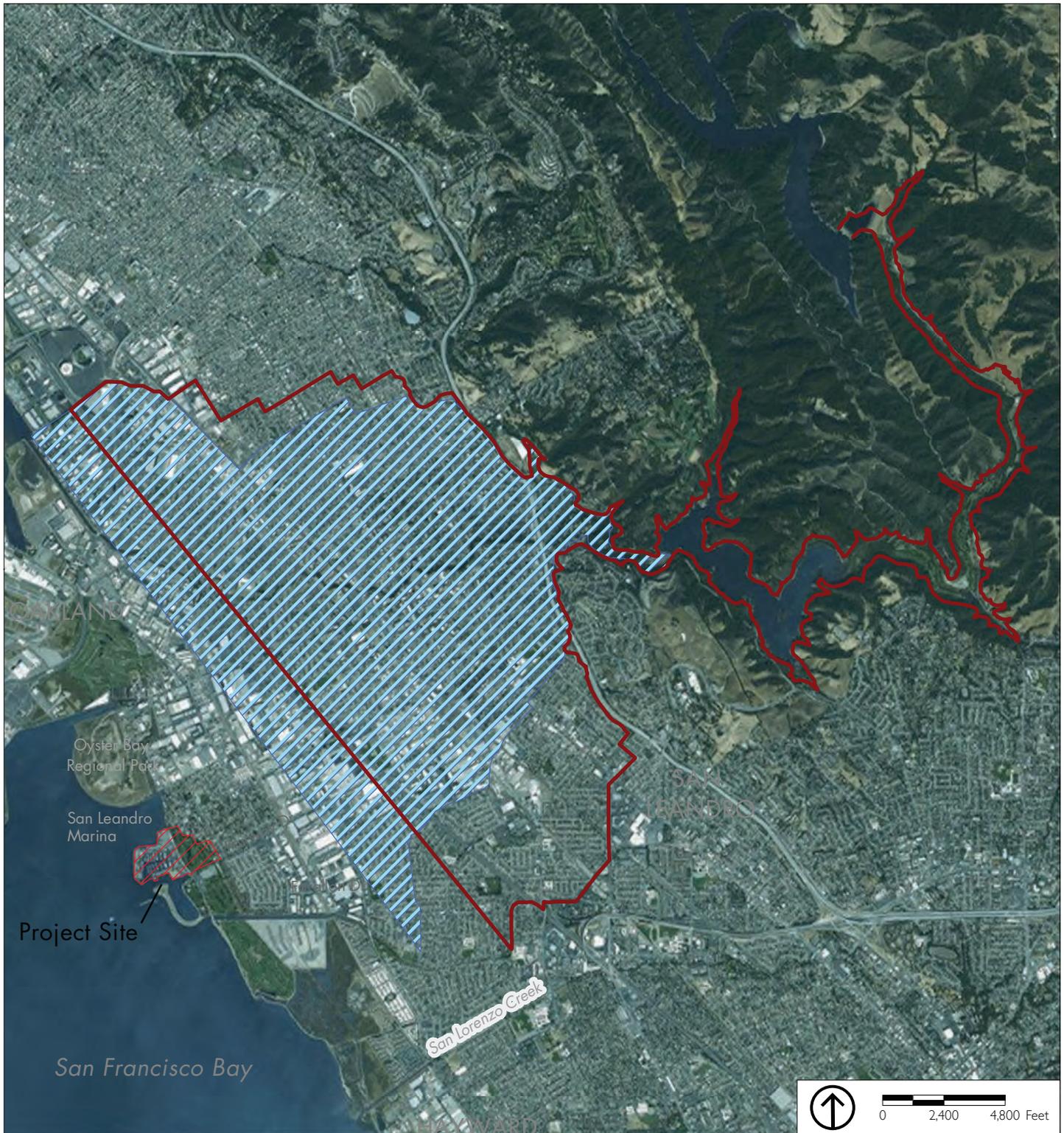
The East Bay Municipal Water District (EBMUD) owns and operates these two reservoirs, which store runoff from local watersheds for water supply. Lake Chabot was built in 1892 and impounds approximately 3 billion gallons of water that is used for non-potable water supply, emergency water supply, conservation/storage of local runoff, and recreation.

Four miles upstream is the Upper San Leandro Reservoir, which was constructed in 1977 and holds more than 13 billion gallons of water. This reservoir is closed to public access, except for the trail system, and is used for raw water storage. While failure of these dams is extremely unlikely, most of San Leandro would be flooded in the event of a dam failure of either Lake Chabot or Upper San Leandro Reservoir.

Requirements for earthquake and flood safety for the EBMUD dams are imposed by the DSOD. Chabot Dam is inspected monthly by EBMUD personnel along with annual inspections by DSOD personnel. DSOD requires that embankments under its jurisdiction are safe enough to withstand a maximum credible earthquake without an uncontrolled release of reservoir water. In 2003, DSOD requested EBMUD to perform a stability evaluation of the Chabot Dam. The results, which were issued in 2005, indicated that upgrading the dam and retrofitting the outlet works was warranted. An Environmental Impact Report (EIR) was certified in December 2013 that discusses the proposed seismic upgrade program in detail and the dam improvements are expected to begin in 2016. However, EBMUD considers both Lake Chabot and Upper San Leandro dams to be stable and does not expect them to breach. The risk of dam failure is extremely low, with seismic strengthening soon to take place at Lake Chabot, and continuing maintenance and further improvements will take place at both dams in the future.

⁴¹ Association of Bay Area Government (ABAG), 2013. *Dam Failure Inundation Maps*, <http://www.abag.ca.gov/cgi-bin/pickdamx.pl>, accessed August 6, 2014.

⁴² California Office of Emergency Services, 2009. *Dam Inundation Registered Images and Boundary Files in Shape File Format*. Version DVD 3, April.



Source: PlaceWorks, 2014; California Governor's Office of Emergency Services, 2007.

Key

- Dam Inundation Zone for Upper San Leandro Reservoir
- ▨ Dam Inundation Zone for Lake Chabot
- ▨ Project Site

Figure 4.8-5
Dam Inundation Map

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Tsunami, Seiche, and Mudflow

Tsunamis, or seismic sea waves, are oceanic waves that are generated by earthquakes, submarine or shoreline volcanic eruptions, and large submarine or shoreline landslides. Tsunamis have been recorded to reach heights of more than 100 feet and can originate hundreds or even thousands of miles away, averaging 450 miles per hour (mph) across the open ocean. Upon nearing land, the tsunami wave significantly slows, and causes the water ahead of it to recede from shore. Most tsunamis result in very strong and fast tides, rather than giant breaking waves; casualties are often the result of strong currents and floating debris.

Fifty-one tsunamis have been recorded or observed within the San Francisco Bay area since 1850.⁴³ Of these, only two tsunamis caused damage in San Francisco Bay: the 1960 Chile earthquake and the 1964 Alaska earthquake. The 1964 Alaska earthquake caused the most damage of the two and had an amplitude of approximately 1.1 meters (3.6 feet) at the Presidio in San Francisco. The West Coast and Alaska Tsunami Warning Center in Palmer, Alaska, operated by the National Weather Service, is responsible for issuing warnings about potential tsunamis along the West Coast of the United States. Warning times vary depending on the distance to the earthquake. For most tsunamis approaching the coast, several hours are available to evacuate residents and undertake other emergency actions.

Given the history of tsunamis in San Francisco Bay, the risk of flooding due to a tsunami event is considered to be very low for the Project area. Tsunami hazards in San Francisco Bay are much smaller than along the Pacific Coast, because the Bay is an enclosed body of water. However, given the low elevation of the Project site (approximately 5 to 12 feet above sea level) and its proximity to San Francisco Bay, there is a potential for flooding to occur. ABAG has developed tsunami evacuation maps for the Bay Area and the Project site is within the tsunami inundation evacuation zone, as shown on Figure 4.8-6.⁴⁴ It should be noted that the area impacted by flooding from a tsunami typically would be much smaller than the evacuation area.

A seiche is an oscillation wave generated in an enclosed or partially enclosed body of water, such as a lake, reservoir, or harbor, and can be compared to the back-and-forth sloshing in a bathtub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, tsunamis, or landslides into the water body. There are no data on the local occurrence or impact of seiches, as none have been recorded in the Bay Area.⁴⁵ Outside the Bay Area, earthquake-generated seiches have on occasion damaged dams and aboveground water storage tanks. In addition, isolated damage to adjacent or downgradient structures has occurred from seiches occurring in swimming pools or small shallow lakes or ponds.

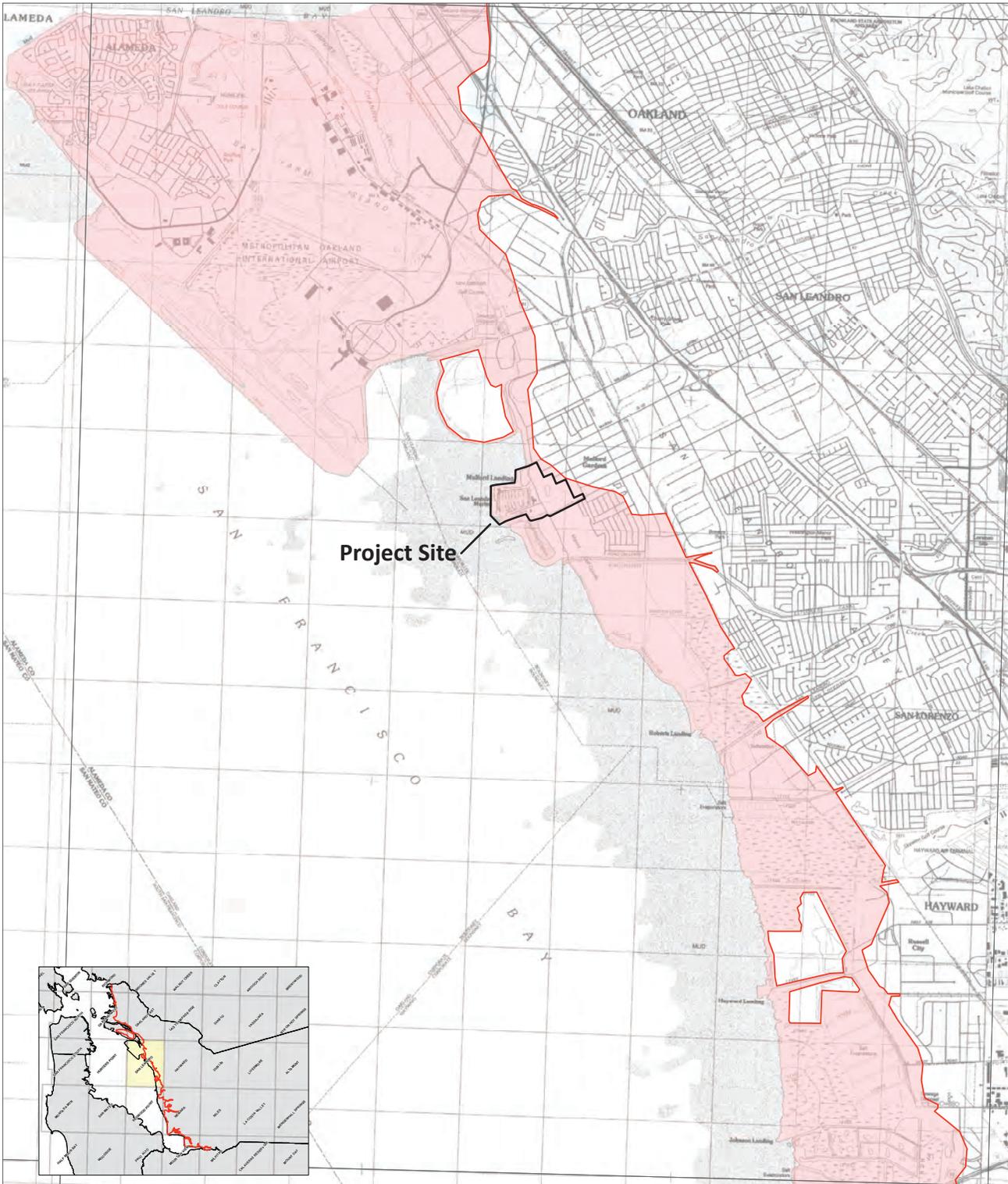
⁴³ The Bay Citizen, 2011. *Mapping Risk: Bay Area Tsunami Plans*. <https://www.baycitizen.org/data/disasters/mapping-risk-tsunami-plans-bay-area/>. Accessed on August 6, 2014.

⁴⁴ Association of Bay Area Governments (ABAG), 2013. *Tsunami Inundation Map for Coastal Evacuation*, <http://gis.abag.ca.gov/website/Tsunami/index.html>, accessed August 6, 2014.

⁴⁵ City of Oakland, 2012. *City of Oakland General Plan, Safety Element*.



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- Tsunami Inundation Line
- Tsunami Inundation Area

Figure 4.8-6
Tsunami Evacuation Zone

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In the vicinity of the Project site, there are no nearby aboveground storage tanks or large bodies of water. However, the Project site is southwest of Lake Chabot and Upper San Leandro Reservoir. A seiche could theoretically occur in these reservoirs as the result of an earthquake or other disturbance, but the flooding impact would be less than that of the dam inundation zones. Since the floodwaters from a breach of these dams would not reach the Project site, the potential impact from a seiche would be negligible.

Mud and debris flows are mass movements of dirt and debris that occur after intense rainfall, earthquakes, and severe wildfires. The speed of a slide depends on the amount of precipitation, steepness of the slope, and alternate freezing and thawing of the ground. Most debris flows occur during intense rainfall in areas with steep slopes. The Project site is in a relatively flat area of the City along the coastline. According to the ABAG map of rainfall-induced landslides, it is outside of an area likely to produce debris flows.⁴⁶

4.8.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant hydrology and water quality impact if it would:

1. Violate any water quality standards or 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 to a level which would not support existing land uses or planned uses for which permits have been granted).
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site.
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.
5. Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
6. Otherwise substantially degrade water quality.
7. 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 or place within a 100-year flood hazard area structures, which would impede or redirect flood flows.
8. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a levee or dam.
9. Expose people or structures to a significant risk of inundation by seiche, tsunami, or mudflow.

⁴⁶ Association of Bay Area Government (ABAG), 2014. *Interactive Rainfall-Induced Landslides Map*. Accessed at <http://gis.abag.ca.gov/website/LandslideDistribution/index.html>.

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4.8.3 IMPACT DISCUSSION

HYDRO-1 The Project could potentially violate water quality standards or waste discharge requirements.

The proposed Project would result in a significant environmental impact if it would violate any water quality standards or waste discharge requirements. As described in Section 3.4.1.2, Project Components, of Chapter 3, Project Description, of this draft EIR, the proposed Project would consist of new office space, hotel rooms, housing units, restaurants, associated parking, and various public amenities. The proposed Project’s redevelopment of the marina area would require the demolition of several existing structures, including the 462-slip harbor in order to accommodate the proposed Project components. As such, construction and operational impacts associated with the demolition of existing structures and construction of new structures could result in impacts to water quality and waste discharge attributed to water pollution from soil erosion and increased stormwater runoff.

Construction Impacts

Landside Construction

Future construction activities associated with development of the Project could negatively affect the water quality of surface waters. Grading and other earthmoving activities during construction would expose soils, which could be eroded and deposited into downstream receiving waters. This in turn would increase the amount of turbidity and sediment in these water bodies, which could impact aquatic life. Additionally, chemicals or fuels could accidentally spill and be washed into receiving waters.

Future development within the Project area would be required to comply with State and local water quality regulations designed to control erosion and protect water quality during construction. This includes compliance with the requirements of the NPDES General Permit, which requires preparation and implementation of a SWPPP. The SWPPP must include erosion and sediment control Best Management Practices (BMPs) that would meet or exceed measures required by the General Permit, as well as BMPs that control hydrocarbons, trash, debris, and other potential construction-related pollutants. Construction BMPs would include inlet protection, silt fencing, fiber rolls, stabilized construction entrances, stockpile management, solid waste management, and concrete waste management. Implementation of BMPs would prevent or minimize environmental impacts and ensure that discharges during the construction phase of the Project would not cause or contribute to the degradation of water quality in receiving waters. In addition, Chapter 7-12 of the San Leandro Municipal Code requires project applicants to prepare erosion control and sedimentation control plans for submittal to the City Engineer prior to the start of project construction and Chapter 3-12 of the Municipal Code requires BMPs to be implemented to minimize stormwater discharges from the site during construction. Compliance with local and State regulatory requirements and implementation of construction BMPs would minimize discharges during the construction phase of the Project and would not result in the degradation of water quality in receiving waters. Therefore, construction-related water quality impacts are *less than significant*.

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Waterside Construction

Construction and demolition activities associated with the existing marina, docks, and piers have the potential of resulting in temporary water quality impacts. Removal of piers and pilings would result in the temporary re-suspension of sediments and associated increase in turbidity levels. Suspended sediments can lower levels of dissolved oxygen, increase salinity, increase concentrations of suspended solids, and possibly release chemicals present in the sediments into the water column. The degree of turbidity would depend on the quantity and duration of the construction activity, the methods and type of equipment used, and the skill of the operator. However, increased turbidity levels are typically limited to 50 to 150 feet from the construction or demolition activities.⁴⁷ The turbidity impacts are expected to be short-term and localized around the demolition locations. The length of time it takes for the suspended material to settle as well as the current direction and velocity would determine the size and duration of the turbidity plume. Turbidity can be expected to dissipate in a period of 20 to 30 minutes, as was demonstrated at the Dredged Material Management Program Pilot Capping Project in Long Beach.⁴⁸ This project would not involve dredging and given the slow-moving currents in the area, turbidity impacts should dissipate quickly. However, this is considered to be a *significant* impact. Additional analysis associated with these issues in regard to biological resources is provided in Section 4.3 of this EIR.

Impact HYDRO-1A: Construction activities could temporarily degrade water quality with increases in suspended sediment and turbidity and could result in the release of chemicals and hydrocarbon fuels into the water column.

Mitigation Measure HYDRO-1A: Minimize Impacts to Water Quality during Waterside Demolition and Construction Activities. The following mitigation measures are designed to avoid adverse impacts on water quality during waterside demolition and construction activities:

- Piles shall be removed during low tide periods to minimize the amount of sediments re-suspended in the water column.
- When removing piles, the pile shall be hit or vibrated first to break the bond with the sediment, which would minimize the likelihood of the pile breaking and reduce the amount of sediment released into the water column.
- A turbidity curtain shall be installed prior to removing or installing piles or any other waterside activities to minimize turbidity impacts in the water column.
- Piles shall be pulled from the subsurface and quickly placed onto a receiving barge or land to minimize potential releases of creosote, petroleum sheens, and turbidity in the water column. Piles shall not be rinsed or washed. The storage area for the piles shall include straw bales, filter fabric, or other containment devices to contain runoff.
- During removal of the existing dock system, floating rafts and/or trash and debris containment booms shall be placed under the docks and around the areas of demolition to contain debris that may be released during these activities.

⁴⁷ San Diego Unified Port District, 2012. *BAE Systems Pier 4 Replacement Project, Final EIR, State Clearinghouse No. 2012031024, dated August 1, 2012 (certified August 14, 2012).*

⁴⁸ San Diego Unified Port District, 2012. *BAE Systems Pier 4 Replacement Project, Final EIR, State Clearinghouse No. 2012031024, dated August 1, 2012 (certified August 14, 2012).*

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- Any waterside construction activities shall be restricted to the period from June 15 through October when special-status fish species would most likely not be expected within the affected areas.

Significance After Mitigation: Less than significant.

In addition, constituents of concern could potentially be released when bottom sediments are suspended in the water column. These impacts would be transient in nature and the water quality sampling results from the nearest RMP monitoring location to the Project site showed that all analyzed parameters, trace elements, and chemicals were within RWQCB water quality objectives. Therefore, the possibility of sediments containing toxic pollutants creating adverse water quality impacts at the Project site is considered to be *less than significant*.

Removal of the existing dock system will create some debris that has the potential to impact water quality if it is not contained and disposed of properly. And there is the potential for accidental oil or fuel spills to occur during the proposed demolition or construction operations that could impair and/or degrade water quality in the Bay. Such events are likely to be localized spills of refined diesel fuels, gasoline, or lubricating oils. The potential for a leak or spill to occur is low; however, the potential for a significant impact to marine resources or water quality in the Bay is moderate to high.

Further, a small portion of the northern area of the Project site west of Monarch Bay Drive, as shown on Figure 4.3-3 in the Biological Resources section of the EIR, may require a Section 404 permit from the Army Corps and a Section 401 water quality certification from the RWQCB. It could be classified as jurisdictional wetlands; however, a formal determination would be made by the regulatory agencies. Also, the drainage channel along the west side of the golf course could be determined to be regulated waters by the Army Corps. If these areas are considered to be regulated wetlands, then permits and certifications would be issued and would specify methods for ensuring the protection of water quality during construction activities. In addition, the use of BMPs to minimize turbidity, control floating debris, and provide spill containment and cleanup equipment would reduce potential impacts to water quality during waterside construction activities.

Given that there could be impacts to water quality related to construction activities, and because it is unknown whether or not the small portion of the northern area of the Project site west of Monarch Bay Drive would be considered jurisdictional wetland, the potential impact would be considered *significant* impact.

Impact HYDRO-1B: Construction activities could temporarily degrade water quality with increases in suspended sediment and turbidity and could result in the release of chemicals and hydrocarbon fuels into the water column.

Mitigation Measure HYDRO-1B: Minimize Potential for Fuel Releases During Waterside Demolition and Other Construction Activities. The following mitigation measures are designed to avoid potential releases of fuel constituents into the water column during demolition/construction activities:

- A spill contingency plan shall be prepared that addresses the potential for an accidental release of fuel into navigable waterways. The plan shall include floating booms and absorbent materials to

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recover hazardous spills and include provisions for containment, removal, and disposal of spilled materials.

- No fueling, cleaning, or maintenance of vehicles or equipment shall take place within an area where an accidental discharge to navigable waterways may occur.
- All vehicles and equipment operating within or adjacent to the marina or other waterways shall be visually inspected for fuel or waste releases before the beginning of the work day. If spillage or leaks occur during the work day, they shall be noted and recorded and immediate action shall be taken for removal and disposal.
- Floating booms shall be available for containing spills or debris discharged into the water during demolition and construction activities and any debris shall be removed as soon as possible but no later than the end of each day.
- If it is determined that a small portion of the Project site west of Monarch Bay Drive and/or the drainage channel along the west side of the golf course are jurisdictional wetlands or regulated waters by the Army Corps, a Section 404 permit shall be obtained from the Army Corps and a Section 401 water quality certification shall be obtained from the RWQCB. The permit and certification shall specify methods for protecting water quality during construction activities, including BMPs to minimize turbidity, control floating debris, and provide spill containment and cleanup equipment.

Significance After Mitigation: Less than significant.

Operational Impacts

Removal of the marina and associated boats, piers, and docks would have a beneficial impact on water quality. This is because current Marina operations, boater activities, and periodic dredging to maintain the channel have the potential to significantly impact water quality. There also is the potential for the discharge of gray water (galley, bath, and shower water) and black water (sewage) from live-aboards into Bay waters as well as fuel releases of gasoline and diesel from boating activities. With the removal of the marina, there is the potential for improvements over existing water conditions. In addition, the increase in the tidal prism could provide for increased flushing of Bay waters, thereby improving the water quality. An aeration fountain is also proposed in the harbor basin to aid in water circulation, which also would result in water quality improvements.

However, post-construction impacts from landside development of the Project could affect drainage patterns and increase the overall amount of impervious surfaces, thus creating changes to stormwater flows and water quality. Increasing the total area of impervious surfaces can result in a greater potential to introduce pollutants to receiving waters. Urban runoff can carry a variety of pollutants, including oil and grease, metals, sediment, and pesticide residues from roadways, parking lots, rooftops, and landscaped areas depositing them into adjacent waterways via the storm drain system.

Water quality in stormwater runoff is regulated locally by the Alameda County Clean Water Program, which includes the C.3 provisions set by the San Francisco Bay RWQCB. Adherence to these regulations requires new development to incorporate treatment measures, an agreement to maintain them, and other appropriate source control and site design features that reduce pollutants in runoff. Many of the

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requirements consider Low Impact Development (LID) practices, such as the use of bioswales, infiltration trenches, media filtration devices, pervious surface treatments, and bioretention areas. In addition, the Project applicant is required by City ordinance to prepare a Stormwater Management Plan (SWMP) that includes the post-construction BMPs including site design measures, source control measures, and stormwater treatment measures that would be implemented. Neighborhood and lot-level BMPs to promote “green” treatment of storm runoff will be emphasized as voluntary measures, consistent with RWQCB guidance for NDPES Phase 2 permit compliance. BMPs would be designed in accordance with the California Stormwater BMP Handbook for New and Redevelopment or other accepted guidance manuals and all designs would be reviewed and approved by the City of San Leandro prior to the issuance of grading or building permits. BMPs appropriate to control runoff for the Project would include various LID measures as listed above. Since the Project area has a high water table, BMPs that do not rely on infiltration are most appropriate.

In addition, the Project applicant would need to prepare an Operations and Maintenance (O&M) Plan for post-construction water quality and quality control measures, as per Alameda County C.3 provisions. The Project applicant would also need to identify responsibility for maintenance of the stormwater treatment facilities and provide adequate funding to maintain and operate the stormwater improvements. Applicable programs and regulations that apply to the treatment of stormwater runoff during the operational phase of the project would result in water quality impacts at a *less-than-significant* level.

In addition to compliance with SWPPP requirements and implementation of post-construction BMPs, which would ensure that water quality is maintained throughout construction and operation of the proposed Project, there are several San Leandro General Plan policies that reflect regulatory requirements to maintain and improve water quality, as provided in Table 4.8-1.

With implementation of these regulatory requirements, the proposed Project would result in *less than significant* impacts with regard to water quality for the operational phase of the Project.

Significance Before Mitigation: Significant for construction phase of the project.

HYDRO-2 The 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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted.)

The proposed Project would result in a significant environmental impact if it would 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. Development of the proposed Project would result in an increase in impervious surfaces. In addition, there may be the potential diversion of groundwater to surface water if short-term construction dewatering is required due to the shallow groundwater table. These activities could result in a decrease in groundwater recharge to the East Bay Plain Subbasin of the Santa Clara Valley Groundwater Basin for which beneficial uses have been established by the San Francisco Bay Basin Plan.

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Dewatering of excavation pits or trenches may be required during construction. However, the Project is not anticipated to adversely impact groundwater resources because required excavations would intersect only the shallow groundwater table and dewatering would temporarily remove groundwater with no impact to the regional groundwater system. Groundwater beneath the Project site is shallow, brackish, non-potable and unsuitable for domestic use. Groundwater extracted during dewatering would likely reflect the characteristics of San Francisco Bay waters because of the close proximity to the Bay and likely subsurface interactions. Dewatering could result in short-term, localized alterations in groundwater levels in the immediate vicinity of the Project site, but this reduction would not result in regional groundwater drawdown. Dewatering activities would require obtaining a Waste Discharge Requirements (WDR) permit from San Francisco Bay RWQCB. The WDR permit requirements would require testing to prevent discharged water from posing a risk to water quality in San Francisco Bay. Should the results of the testing indicate that pollutant levels are too high, treatment of the collected groundwater would be required prior to discharge to San Francisco Bay or the City's storm drain system. In addition, the proposed Project would be subject to SWPPP requirements, which include measures for spill prevention, control, and containment that would prevent potential construction pollutants from leaching into the shallow groundwater. These existing regulatory requirements would ensure that the discharge of construction dewatering would not significantly impact groundwater quality.

The proposed Project would not use or deplete groundwater resources. Water supplied to the City of San Leandro is obtained from the East Bay Municipal Water District (EBMUD) reservoir and aqueduct system. The groundwater aquifer beneath San Leandro is not currently used for water storage or supply; EBMUD relies on surface water and recycled water to meet water supply demands for its customers.⁴⁹ Similarly, the proposed Project would not involve the construction of new groundwater wells or the use of existing wells. The residential housing units on the Marina Golf Course would be supplied with EBMUD water. Therefore, the Project would not deplete the production level of nearby wells.

The implementation of Low Impact Development (LID) measures and on-site infiltration, as required under the C.3 provisions of the Alameda County Clean Water Program will increase the potential for groundwater recharge. Also, the use of site design features as per the C.3 provisions and implementation of water use efficiency measures mandated by the Water Conservation Act of 2009 will ensure that groundwater supplies are not depleted and impacts would be less than significant. Although not required by codes or regulations, the General Plan goals and policies listed in Table 4.8-1 encourage groundwater recharge so that future development would be served with an adequate water supply.

The proposed Project will not use groundwater supplies or interfere with groundwater recharge; therefore, the impact would be considered *less than significant*.

Significance Before Mitigation: Less than significant.

⁴⁹ East Bay Municipal Utility District (EBMUD), 2011. *Water Management Plan 2011*. Adopted by EBMUD Board in April 2012.

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HYDRO-3 **The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site.**

The proposed Project does not involve the alteration of any watercourse, stream, or river. However, construction activities for the Project would involve demolition of existing structures and removal of the 462-slip harbor, grading, excavation, and the construction of buildings, sidewalks, driveways, and parking lots, which could increase the potential for erosion and/or siltation. As previously discussed under HYDRO-1, standard erosion and sediment control measures are required and would be implemented as part of the SWPPP for the proposed Project to minimize the risk during construction. The SWPPP must include an erosion control plan that prescribes measures such as phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection, and provisions for re-vegetation or mulching. The erosion control plan would also include treatment measures to trap sediment once it has been mobilized, including inlet protection, straw bale barriers, straw mulching, straw wattles, silt fencing, check dams, terracing, and siltation or sediment ponds. In addition, Chapter 7-12 of the San Leandro Municipal Code requires project applicants to prepare erosion control and sedimentation control plans for submittal to the City Engineer prior to the start of project construction. With implementation of these measures during construction, there would not be a substantial increase in surface runoff resulting in significant erosion or siltation and the impact would be *less than significant*.

Once projects within the Project site have been constructed, the C.3 requirements for new development would include source control measures, site design measures, LID, and treatment measures that address stormwater runoff and would reduce the potential for erosion or siltation. Because the proposed Project involves the creation or replacement of 10,000 square feet or more of impervious surface, post-construction stormwater treatment is required to ensure that discharge rates of stormwater generated during a peak storm event would not exceed pre-construction levels. All detention or stormwater treatment facilities would be designed to the standards of the City of San Leandro and the ACFCO. Several of the General Plan goals and policies listed in Table 4.8-1 also reflect implementation of regulatory requirements for drainage improvements to ensure that stormwater runoff is adequately handled and would not contribute to on-site or off-site erosion.

Compliance with the established regulatory requirements cited above will ensure that impacts from erosion and siltation both on- and off-site will be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDRO-4 **The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial flooding on- or off-site.**

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Development within the Project site and the change in land use would result in an increase in impervious surfaces that could cause an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause flooding if adequate drainage facilities are not available. However, future development associated with this Project does not involve the alteration of any watercourse, stream, or river. The Project site has an existing storm drain system and new development would require infrastructure improvements to connect with the existing system.

The waterside portion of this Project will not result in an alteration of existing drainage patterns. Removal of the 462-slip harbor and associated piers and piling and the addition of an aeration fountain would improve water circulation patterns. Portions of the project west of Monarch Bay Drive would be constructed on previously developed areas that are covered in impervious surfaces and would not alter existing drainage patterns.

The portion of the Project east of Monarch Bay Drive would be constructed on the existing Marina Golf Course and would involve the creation of 10,000 feet or more of impervious surface and the disturbance of more than one acre of land. This would trigger the implementation of construction phase BMPs, post-construction design measures that encourage infiltration in pervious areas, and post-construction source control measures to help keep pollutants out of stormwater, as per the C.3 provisions of the Alameda County Clean Water Program.

During construction, the Project is subject to NPDES construction permit requirements, including preparation of a SWPPP, which includes BMPs to limit the discharge of sediment and non-stormwater discharges from the site. Once constructed, the C.3 provisions would include source control measures and site design measures to address stormwater runoff. In addition, stormwater treatment measures are required to contain site runoff, using specific numeric sizing criteria based on volume and flow rate. Previous discussions describe the specific SWPPP, BMP, and C.3 measures that may be implemented for the Project. All detention or stormwater treatment facilities would be designed to the standards of the City of San Leandro and the ACFCD.

With implementation of these control measures and regulatory provisions to limit runoff from new development sites, the proposed Project would not result in significant increases in runoff that could contribute to on-site or off-site flooding. Therefore, implementation of the proposed Project would have a *less-than-significant* impact with respect to alterations in drainage patterns that could result in flooding.

Significance Before Mitigation: Less than significant.

HYDRO-5 The Project would not create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

An increase in impervious surfaces with development of the proposed Project could result in increases in stormwater runoff, which in turn could exceed the capacity of existing or planned stormwater drainage systems. There currently is no piped storm drain system along the two peninsulas that encircle the harbor (except for isolated catch basins draining to San Francisco Bay) and there is no storm drainage system at the Marina Golf Course. With new development in these areas and the areas north of Mulford Point Drive and south of Pescador Point Drive, an adequately sized storm drainage system to convey on-site

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stormwater runoff to existing storm drain facilities would need to be constructed. The on-site systems would be subject to City and ACFCD review to verify that they meet C.3 provisions for stormwater runoff and that they would not exceed the capacity of downstream drainage systems. The ACFCD is in the process of developing a Hydrology and Hydraulics Manual to provide guidance on sizing and designing drainage systems, based on prescribed storm events. The C.3 provisions cover the construction of stormwater treatment systems and incorporate flow-based and volume-based hydraulic sizing criteria.

In addition, the City of San Leandro would require as a standard condition of approval that developers verify that on-site and off-site drainage facilities can accommodate increased stormwater flows. In addition to building and extending on-site storm drainage infrastructure, the Project applicant will be required to pay for improvements to the storm drain system necessary to accommodate increased flows from the development. Also, implementation of C.3 provisions for new development, which include LID design and bioretention areas, flow-through planters, vegetated buffer strips, and/or on-site retention facilities, would minimize increases in peak flow rates or runoff volumes. Furthermore, the General Plan goals and policies listed in Table 4.8-1 would encourage development that would not exceed the capacity of existing or proposed storm drain systems.

With implementation of these regulatory requirements listed above, impacts to storm drain system capacities would be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDRO-6 **The Project would not otherwise substantially degrade water quality.**

As discussed previously, the principal sources of water pollutants from the proposed Project are runoff with oil and grease, metals, sediment, and chemicals from roadways, parking lots, rooftops, and landscaped areas. Implementation of the Project would require source control, site design, and LID measures to be incorporated in the Project design features, in compliance with the C.3 provisions for stormwater in Alameda County. Implementation of these stormwater control measures, such as bioretention areas and flow-through planters, would provide natural filtration of pollutants from stormwater runoff prior to entry into the storm drain system or San Francisco Bay. As such, the Project would improve the treatment of stormwater on-site and reduce stormwater pollution, thus ensuring that impacts would be *less than significant*. Additionally, compliance with San Leandro Municipal Code Section 3-15, Stormwater Management and Discharge Control, which establishes measures to minimize and reduce runoff entering the stormwater system, would further protect water quality during Project construction and operation. Therefore, development of the proposed Project would not otherwise substantially degrade water quality and impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

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HYDRO-7 The Project would 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, would place structures within a 100-year flood hazard area which would impede or redirect flood flows, or would place housing or structures within areas subject to sea level rise and/or coastal high hazards.

Although most of the proposed Project is outside of the 100-year floodplain, the area south of Pescador Point Drive, which is proposed for mixed use development, is within the 100-year floodplain designated as Zone VE – coastal flood hazard subject to wave velocity. Therefore, the proposed Project would result in the placement of residential structures in a FEMA-designated 100-year Special Flood Hazard Area (SFHA). The area within the 100-year floodplain is shown on Figure 4.8-2.

However, as discussed previously in the flooding section under *Existing Conditions*, FEMA is currently revising the Flood Insurance Rate Maps (FIRMs) for all nine counties surrounding San Francisco Bay. This includes the FIRMs for the City of San Leandro. The preliminary FIRM shows that the area south of Pescador Point Drive would no longer be within the 100-year floodplain. However, the area of the project east of Monarch Bay Drive would be designated as within the 100-year floodplain (Zone AE) with a base flood elevation (BFE) of 10 feet above mean sea level (msl). As discussed previously, the City of San Leandro and Alameda County Public Works Department are working together to implement actions that would eliminate 1,000 properties from the preliminary FIRMs. If negotiations with FEMA are successful, it is likely that no portions of the project site would be within the 100-year floodplain. However, for purposes of this discussion, it is assumed that the portion of the site south of Pescador Point Drive could be in the 100-year floodplain (Zone VE) and the portion of the site east of Monarch Bay Drive could be in the 100-year floodplain (Zone AE).

Because the portion of the Project south of Pescador Point Drive is also located in a coastal high hazard area (Zone VE), additional building requirements would apply. These requirements can be found in the FEMA NFIP requirements for new construction and San Leandro's Municipal Code, Chapter 7-9-530, *Coastal High Hazard Areas*. The requirements pertain to the siting of the building, the elevation of the lowest floor in relation to the Base Flood Elevation (BFE), the foundation design, and enclosures below the lowest floor. For example, the bottom of the lowest horizontal member must be above the BFE and within the VE zone, any portion of the building below the BFE must be less than 299 square feet and can only be used for storage, parking, and access (SPA). All structures should be elevated one to three feet above the BFE, which can result in significant reductions in flood insurance premiums⁵⁰ as further described below.

All new construction must be located landward of the reach of mean high tide (i.e., the mean high water line).⁵¹ All new construction also must be elevated on pilings, posts, piers, or columns so that the bottom of the lowest horizontal structural member of the lowest floor is at or above the BFE, which is 10 feet mean sea level using the North American Vertical Datum of 1988 (NAVD88) at this location. The piling or column foundations must be anchored to resist flotation, collapse, and lateral movement due to the

⁵⁰ Information provided by Mr. Jerry Smith, City of San Leandro Chief Building Officer and Flood Plain Administrator.

⁵¹ City of San Leandro, 2014. *San Leandro Municipal Code, Chapter 7-9 Floodplain Management, Section 7-9-530, Coastal High Hazard Areas*.

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effects of wind and water loads. A registered engineer or architect must develop or review the structural design and plans for construction and certify that the design and methods of construction are in accordance with accepted standards. In addition, erosion control structures as well as bulkheads, seawalls, and retaining walls cannot be attached to the building or its foundation. Fill may not be used for the structural support of any building, but minor grading and the placement of minor quantities of fill is permitted for landscaping and drainage purposes and for support of parking slabs, pool decks, patios, and walkways. Finally, the space below all new construction must be either free of obstruction or enclosed only by non-supporting breakaway walls, open wood latticework, or insect screening. NFIP requirements also specify permitted uses below the BFE, the use of flood damage-resistant materials below the BFE, and placement of mechanical/utility equipment below the BFE.

Prior to the start of construction or development, the City of San Leandro will require Project applicants to obtain a development permit from the City's Floodplain Administrator and construct new development in accordance with the standards provided in Chapter 7-9-530, *Coastal High Hazard Areas*. Prior to occupancy of any building, proof that a Letter of Map Revision (LOMR) and an elevation certificate has been obtained from FEMA must be provided to the City. Although compliance with the FEMA and City Municipal Code requirements would reduce potential flood hazards, this is considered to be a *significant* impact.

BCDC has published sea level rise inundation maps for low-lying areas within San Francisco Bay. Much of the Project site, including the residential development on the Marina Golf Course, is within the area vulnerable to a projected sea level rise of 16 inches by the year 2050 and a sea level rise of 55 inches by 2100.⁵² These sea level rise inundation predictions by BCDC relate to tidal flooding and storm surge, but do not incorporate coincident watershed flooding, which would increase flood hazards in areas affected by sea level rise and increases in tide levels. The individual and collective responses of Bay Area counties and municipalities to this flooding potential are in the early stages of development. However, the City of San Leandro and Alameda County are in the process of implementing policies and programs to adapt to the changing climate and to utilize estimates of sea level rise and incorporate data into mapping of areas subject to future inundation. Development within areas shown to be impacted by sea level rise, as shown on the BCDC maps, is considered to be a significant impact.

In addition, the City goals and policies that apply to the proposed Project, as listed in Table 4.8-1 would encourage development that reduces the impacts from flooding. In particular, Policy 29.06, *Construction in the Floodplain* and Action 29.06A, *FIRM Amendments*, pertain to these issues.

The FEMA FIRM panels are in the process of being revised, with input provided by the City of San Leandro and Alameda County Public Works Department. It is not known at this time if the portions of the Project that currently are in the designated floodplain would be removed from this designation or whether other portions of the Project could be included to be within the 100-year floodplain. Because there is the potential for housing to be placed within a 100-year flood hazard area, the impact is considered to be *significant*.

⁵² San Francisco Bay Conservation and Development Commission (BCDC), 2014. *San Francisco Bay Scenarios for Sea Level Rise Index Map*. At http://www.bcdc.ca.gov/planning/climate_change/index_map.shtml. Accessed on August 13, 2014.

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Impact HYDRO-7: The Project would place housing within the 100-year floodplain and within areas subject to sea level rise/coastal high hazard.

Mitigation Measure HYDRO-7: Minimize Potential for Flooding for Housing within the 100-Year Floodplain and within Areas Subject to Sea Level Rise/Coastal High Hazard. The current FEMA FIRM panels are undergoing revisions and it is possible that no portions of the Project site will be within the 100-year floodplain when the Project is scheduled to start construction. However, because a portion of the Project site is currently within the 100-year floodplain and a portion of the Project site could be designated as being within the 100-year floodplain, the following mitigation measures are applicable:

- Prior to the start of construction or development, the Applicant shall obtain a development permit from the City's Floodplain Administrator. The application shall include the proposed elevation in relation to mean sea level of the lowest floor (including basement) of all structures and the proposed elevation in relation to mean sea level to which any structure will be flood-proofed in accordance with the City's Municipal Code requirements under Chapter 7-9, *Floodplain Management*.
- All provisions for building within the 100-year floodplain that are specified in the FEMA NFIP requirements and the City's Municipal Code shall be implemented to minimize the risk of flood damage.
- A registered engineer or architect shall develop or review the structural design and plans for construction and certify that the design and methods of construction are in accordance with Federal, State, County, and City standards.
- Prior to the issuance of building permits, a Letter of Map Revision (LOMR) and elevation certificate shall be submitted to the City's Chief Building Official. The bottom of the lowest horizontal structural member of the lowest floor shall be at or above the BFE. Also, any structure below the BFE in the VE zone shall be less than 299 square feet and shall only be used for storage parking, or access (SPA).
- Prior to the start of construction or development, the latest version of the FIRM maps shall be reviewed to determine if portions of the Project site are within the 100-year floodplain and to determine the status of actions taken by the City of San Leandro and the Alameda Public Works Department to remove 1,000 properties from the preliminary FIRM maps. If any portion of the Project site is determined to be within the 100-year floodplain, then the mitigation measures listed above shall be applicable.
- Prior to issuance of a tentative map, a sea level rise risk assessment shall be prepared and submitted to the City for areas of the Project that are subject to sea level rise. . The risk assessment shall be prepared by a qualified engineer and shall be based on the estimated 100-year flood elevation and the best estimates for future sea level rise and current and future flood protection. A range of sea level rise projections for mid-century and end of century shall be used in the risk assessment along with inundation maps. The risk assessment shall identify all types of potential flooding, degrees of uncertainty, consequences of defense failure, and risks to existing habitat from proposed flood protection devices. The Project shall be designed to be resilient to a mid-century sea level rise projection. If the Project would remain in place longer than mid-century, an adaptive management plan shall be developed to address the long-term impacts that would arise. The results of the risk assessment shall be incorporated into the site design, as

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reflected in the site plan review and tentative map review. The sea level rise risk assessment shall also be submitted to BCDC for review and approval for the areas of the project that are within BCDC's jurisdiction (i.e., within 100 feet of the shoreline), prior to the start of construction or development. .

Significance After Mitigation: Less than significant.

HYDRO-8 The Project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

According to the Association of Bay Area Governments (ABAG), the proposed Project is located within the inundation area of two dams: Upper San Leandro Reservoir and Lake Chabot. However, the ABAG inundation maps were developed using information from the 1970s. Since the 1975 inundation map for Lake Chabot was developed, a more recent modeling study (July 2008) conducted as part of the seismic stability analysis predicted a smaller dam inundation zone.⁵³ In addition, the Upper San Leandro Reservoir dam inundation map was updated in 2007 by CalOES. The results show that released water from the dams would not reach the Project site and the Project would not be within any dam inundation zone, as shown on Figure 4.8-4. Also, the risk of dam failure is extremely low and there is no historic record of any dam failure in San Leandro or the Bay Area. Therefore, there would be *no impact* associated with flooding as the result of a dam failure.

Significance Before Mitigation: No impact.

HYDRO-9 The Project would not result in inundation by seiche, tsunami, or mudflow.

A significant impact could occur if the project site is close to the ocean or other water body, which would render it susceptible to the effects of seismically-induced tidal phenomena (seiche or tsunami) or if the site is located adjacent to a hillside area with soil characteristics that would indicate susceptibility to mudslides or mudflows. Since the project site is in a flat, coastal area, there is no potential for impacts due to mudflows.

The risk of flooding due to a tsunami event is considered to be very low within the City of San Leandro due to its location near the east-central portion of San Francisco Bay and the history of minimal tsunami damage within the San Francisco Bay area. The Santa Cruz Marina was impacted by a tsunami in 2011 that originated from an 8.9 magnitude earthquake in Japan, causing major damage to boats and docks. Other harbors and marinas along the California Coast, including Crescent City, were also impacted; however, there was no reported damage to the marinas within San Francisco Bay. Of 51 tsunamis observed in San Francisco Bay since 1850, only two tsunamis caused damage in San Francisco Bay and the maximum

⁵³ East Bay Municipal Utility District (EBMUD), 2008. *Inundation Map for Chabot Dam Based on 2006 Chabot Dam Break Analysis*, July.

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amplitude was 3.6 feet at the Presidio in San Francisco, which is near the outlet to the Pacific Ocean. Nevertheless, the proposed Project is within the tsunami inundation zone, as mapped by ABAG.

Many areas of San Leandro and other coastal cities are within tsunami inundation zones and there are various precautions and warning systems that would be implemented by the City in the event of a tsunami. The City uses Nixle, an automated telephone and text message system that can notify affected portions of the community when emergency alerts or notifications are needed. Also, the National Oceanic and Atmospheric Administration (NOAA) operates the National Tsunami Warning Center and the Pacific Tsunami Warning Center that alert local authorities to order the evacuation of low-lying areas, if necessary. Due to the infrequent nature of tsunamis and relatively low predicted tsunami wave height in the area, the proposed Project is reasonably safe from tsunami hazards. Furthermore, any development for the Project would be subject to the City's flood elevation standards for lands within Special Flood Hazard Areas (SFHAs), as defined by FEMA (Section 7-9 of the San Leandro Municipal Code). Therefore, the potential impact of flooding from tsunamis would be *less than significant*.

There are no large bodies of water, such as reservoirs or lakes, within San Leandro that would create an impact from seiches. A seiche could theoretically occur in the Upper San Leandro Reservoir and Lake Chabot as the result of an earthquake or other disturbance, but the flooding impact would be less than the dam inundation zones. Since the dam inundation maps show that flooding from dam breaches would not reach the Project site, there would be no impact from seiches as well. The long distances of shallow water in San Francisco Bay would minimize waves generated by a seiche, resulting in a *less than significant* impact. The Project site is in a relatively flat area of the City and according to the ABAG map of rainfall-induced landslides, it is outside of an area likely to produce mud slides or debris flows.

In summary, although the project site is in a tsunami inundation zone, the City and County's tsunami warning system coupled with the infrequent nature of tsunamis and low predicted wave heights for tsunamis or seiches in the area would result in *less than significant* impacts.

Significance Before Mitigation: Less than significant.

4.8.4 CUMULATIVE IMPACTS

HYDRO-10 The Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to hydrology and water quality.

The analysis of cumulative hydrology and water quality impacts considers the larger context of future development within the San Leandro Marina Watershed, which encompasses the Project site. Cumulative impacts can occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable future projects in a similar geographic area. Cumulative impacts could result from incremental changes that degrade water quality or contribute to drainage and flooding problems within the watershed.

As discussed previously, development of the proposed Project and other cumulative projects within the watershed would require conformance with extensive State and local policies and regulations that would

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ensure hydrology and water quality impacts would be less than significant . Any new development within the watershed would be subject to City policies and ordinances, design guidelines, zoning codes, and other applicable City requirements that address impacts related to hydrology and water quality. More specifically, potential changes related to stormwater quality, stormwater flows, drainage, impervious surfaces, and flooding would be minimized or avoided by the implementation of stormwater control measures, retention, infiltration, and LID measures, and review by the City's Engineering and Transportation Department to integrate measures to reduce potential flooding impacts. With the implementation of these measures, the impacts to water quality and hydrology would be *less than significant* for cumulative projects within the San Leandro watershed.

The water quality regulations implemented by the San Francisco Bay RWQCB take a basin-wide approach and consider water quality impairment in a regional context. For example, the NPDES Construction Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the MS4 Permit works with all municipalities to manage storm water systems to be collectively protective of water quality. In addition, the implementation of goals and policies under the proposed Project and other projects within the watershed would require coordination with the ACFCD to minimize potential impacts to water quality and hydrology with planned development. For these reasons, impacts from future development within the watershed on hydrology and water quality are not cumulatively considerable and would not result in a significant cumulative impact with respect to hydrology and water quality.

The Project site comprises a small portion of the San Leandro Marina Watershed (less than 10%) and is one of many planned projects within the City of San Leandro. This Project also would be subject to all of the State and local policies and regulations that would ensure hydrology and water quality impacts would be less than significant . As such, the Project's contribution would not be cumulatively considerable and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

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4.9 LAND USE AND PLANNING

This chapter describes the regulatory framework and existing conditions related to land use in the vicinity of the Project site, and the potential plan consistency impacts that could result from development of the proposed Project.

4.9.1 ENVIRONMENTAL SETTING

4.9.1.1 REGULATORY FRAMEWORK

This section describes land use plans and policies relevant to the proposed Project.

Regional Plans

Plan Bay Area, Strategy for a Sustainable Region

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) *Plan Bay Area* is the Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). The draft *Plan Bay Area* was adopted July 18, 2013.¹ The SCS sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. The *Plan Bay Area* meets a 16 percent² per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

In 2008, MTC and ABAG initiated a regional effort (FOCUS) to link local planned development with regional land use and transportation planning objectives. Through this initiative, local governments identified Priority Development Areas (PDAs) and Priority Conservation Areas (PCAs). PDAs and PCAs form the implementing framework for *Plan Bay Area*.

- **PDAs** are transit-oriented infill development opportunity areas within existing communities that are expected to host the majority of future development.
- **PCAs** are regionally significant open spaces for which there exists broad consensus for long-term protection but nearer-term development pressure.

Overall, well over two-thirds of all regional growth, in the Bay Area, by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs.³ There are three PDAs in San Leandro identified in *Plan Bay Area*:⁴

¹ It should be noted that the Bay Area Citizens filed a lawsuit on MTC's and ABAG's adoption of *Plan Bay Area*.

² It should be noted that the California Air Resources Board (CARB) set a target reduction of 15 percent and the MTC/ABAG set a regional target reduction of 16 percent.

³ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area, Strategy for a Sustainable Region*.

⁴ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area*. <http://geocommons.com/maps/141979>.

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- **San Leandro: East 14th Street:** Future plans include pedestrian, sidewalk, and streetscape improvements and transformation of what currently exists as a relatively unbroken strip of commercial land uses into a series of mixed-use districts, each with a different character and focus. These districts will include a mix of local-serving retail, restaurants, and services, and will be linked by residential areas with high quality, multi-family housing.

The changes envisioned for the East 14th Street corridor would transform a major transportation route in San Leandro from an auto-oriented commercial strip into an attractive boulevard, lined with higher-density housing between activity nodes that offer a mix of uses, including shops, restaurants, offices, and services. These proposed changes, when accompanied by planned streetscape improvements, would make the corridor more pedestrian-, bicycle-, and transit-friendly. As a result, residents will have a wider range of housing choices and will be able to take care of their daily needs without relying on a car.⁵

- **San Leandro: Downtown Transit Oriented Development:** In the future, retail mixed-use development, with pedestrian-oriented retail on the ground floor and housing above, will rise around San Leandro's existing retail downtown core along East 14th Street and Washington Avenue. Residential densities in these areas range from medium to high with a minimum height of two stories for buildings along East 14th Street. The growth calls for mixed-use office development near Davis Street and San Leandro Boulevard to complement existing office buildings in the area. Transit-oriented development (TOD) is particularly encouraged in the areas around BART and between the BART station and downtown core. Development to the east of the BART station, closest to downtown, will include a mix of uses with residential densities.⁶
- **San Leandro: Bay Fair BART Transit Village:** Plans for the area include creating a place that is attractive and safe; improving connections to jobs, services, and transit; providing a range of housing options; fostering fiscal and economic growth that favors the creation of a higher-density; and mixed-use district that promotes walking, biking, and transit use. Strategies to achieve these urban design goals include; circulation and access for pedestrians, bicyclists, drivers, and transit users; parking management; market and financial feasibility; and design guidelines for higher-density development and ensuring appropriate transitions to existing neighborhoods. In particular, these strategies focus on adding more housing in the area while improving the circulation network between the BART site, Bayfair Center, and surrounding areas.⁷

Per the One Bay Area Grant (OBAG) requirements, Congestion Management Agencies (CMAs) will develop a PDA Investment and Growth Strategy for their respective counties; this will be used to guide future transportation investments that are supportive of PDA-focused development.

⁵ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2012, May. Visions for Priority Development Areas- Jobs housing Connection Strategy.

⁶ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2012, May. Visions for Priority Development Areas- Jobs housing Connection Strategy.

⁷ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2012, May. Visions for Priority Development Areas- Jobs housing Connection Strategy.

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San Francisco Bay Plan

The San Francisco Bay Plan was completed and adopted by the San Francisco Bay Conservation and Development Commission (BCDC) in 1968 and was transmitted to the California Legislature and the Governor in 1969. This comprehensive plan is concentrated on the conservation of the San Francisco Bay and pertains to all development at the Bay's shoreline.

In the maps prepared for the Bay Plan, the Project site does not have a priority use identified but the map does identify Monarch Bay Drive as a "scenic drive."⁸ None of the policies listed in the Bay Plan's maps apply exclusively to the Project site but there is a Commission suggestion for a possible extension of the scenic drive (Monarch Bay Drive).

The McAteer-Petris Act designated BCDC as the permanent agency for carrying out the Bay Plan and directs BCDC to exercise its authority to issue or deny permit applications for placing fill, extracting materials, or changing the use of any land, water, or structure within the area of its jurisdiction. The portions of the Project site within 100 feet of the Bay's shoreline, as shown in Figure 4.9-1, are within the area of jurisdiction identified in the Bay Plan. The findings and policies of the Bay Plan are not applicable to the areas of the Project site that are outside of the 100-foot shoreline band. The provisions of the Bay Plan pertaining to areas outside of the 100-foot shoreline band are advisory. Given the scope of the proposed Project, a "major permit" would need to be approved by BCDC in order to carry out the proposed Project. Major permits from BCDC include the requirement for a public hearing as well as the opportunity for written comments from the public. The review necessary for the major permit will analyze the proposed Project for consistency with the objectives and policies described below.

In accordance with Objective 2 of the Bay Plan, which calls for developing the Bay and its shoreline to their highest potential, Section 3(a)(2) on page 7 of the Bay Plan would apply. This section states that all shoreline areas which do not have a priority use area identified should be used in a manner that would not adversely affect enjoyment of the Bay and shoreline by residents, employees, and visitors. Additionally, the Bay Plan contains policies which call for review with respect to the effects of climate change on projects in BCDC's jurisdiction including the requirement that a risk assessment be prepared to assure that the risk of flooding from sea level rise is acceptable.⁹ With respect to recreation, Policy 1 on page 61 of the Bay Plan calls for "diverse and accessible water-oriented recreational facilities, such as marinas, launch ramps, beaches, and fishing piers," to meet the needs of a growing and diversifying population. Finally, the Bay Plan also contains policies related to the aesthetics of development around the Bay including calling for projects to conform with the Public Access Design Guidelines. Precise language regarding permit requirements can be found in Title 7.2 of the California Government Code and Title 14, Division 5 of the California Code of Regulations.

BCDC has the authority to approve projects with conditions which must be carried out as a part of the authorized project. According to the BCDC's website, typical permit conditions include requirements to construct, guarantee, and maintain public access to the Bay, plan review requirements that must be met before construction can begin, and mitigation requirements to offset the adverse environmental impacts of proposed projects.

⁸ San Francisco Bay Conservation and Development Commission, 2008, San Francisco Bay Plan, Plan map 5, Central Bay.

⁹ San Francisco Bay Conservation and Development Commission, 2008, San Francisco Bay Plan, page 36.



Source: PlaceVorks, 2014

Key

-  Project Site
-  BCDC Jurisdiction

FIGURE 4.9-1
APPROXIMATE BCDC JURISDICTION

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Bay Conservation and Development Commission Public Access Design Guidelines

As mentioned above, BCDC has jurisdiction within 100 feet of the Bay's shoreline. As such, proposed development within that jurisdiction are subject to BCDC Public Access Design Guidelines, which are intended to ensure that maximum feasible public access is provided, consistent with proposed projects. BCDC defines "public access" as including physical public access to and along the shoreline of the Bay and visual public access to the Bay from other public spaces.¹⁰ Physical improvements, as defined by BCDC, may include waterfront promenades, trails, plazas, play areas, overlooks, parking spaces, landscaping, site furnishings, and connections from public streets to the water's edge.¹¹ Given that development varies along the San Francisco Bay Shoreline, the amount and quality of public access will likely vary with each development depending on the type, location, and extent of development.

In general, the Public Access Design Guidelines provide recommendations for improving and maximizing public access; however, they do not establish a specific set of design requirements, recognizing that development and character differs from location to location.

Association of Bay Area Governments Bay Trail Plan

The Bay Trail Plan proposes development of a continuous regional hiking and bicycling trail around the perimeter of the San Francisco and San Pablo Bays. Implementation of the Bay Trail is coordinated by the San Francisco Bay Trail Project; a nonprofit organization created by the Association of Bay Area Governments (ABAG) and is housed in its offices. A proposed trail routes goes through the Project site near Monarch Bay Drive and currently continues to the south as a Class I bicycle and pedestrian path.

San Francisco Bay Area Water Trail

The San Francisco Bay Area Water Trail is an ongoing effort to create a network of launch and landing sites to accommodate non-motorized boats and sail craft throughout the San Francisco Bay,¹² and is intended to promote recreational water access opportunities. The Water Trail is a regional trail linking nine counties in the Bay Area and joins three other regional trail systems, including the San Francisco Bay Trail, Bay Area Ridge Trail, and the California Coastal Trail. The nearest designated Water Trail site to the Project area is within Alameda County at the Tidewater Boating Center in Oakland, which is approximately 7 miles north of the Project site. The Water Trail program is implemented by the Coastal Conservancy in collaboration with the ABAG, BCDC, and the Department of Boating and Waterways.

Oakland Airport Land Use Compatibility Plan

The Airport Land Use Compatibility Plan (Land Use Plan) for Oakland International Airport (OAK) presents the criteria, maps, and policies to be utilized by the Alameda County Airport Land Use Commission (Land Use Commission) and other local jurisdictions. These policies apply when reviewing proposals for land use development within the airport influence area for its compatibility with airport operations. The area of

¹⁰ San Francisco Bay Conservation and Development Commission, 2005, Public Access Design Guidelines for the San Francisco Bay, page 3.

¹¹ San Francisco Bay Conservation and Development Commission, 2005, Public Access Design Guidelines for the San Francisco Bay, page 3.

¹² San Francisco Bay Area Water Trail, <http://sfbaywatertrail.org/>, accessed on September 25, 2014.

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influence was defined based on political boundaries, noise contours and flight tracks. The Project site is within the airport influence area. Additionally, the Land Use Plan establishes Safety Compatibility Zones which depict the relative risk of aircraft accidents. The Project site is not located within any of the designated Safety Compatibility Zones.

General Plan amendments like the one necessary for the proposed Project are subject to review by the Land Use Commission. The Commission must find that the proposed General Plan amendment is consistent with the Land Use Plan, unless the ALUC Commission chooses not to review the amendment or the local jurisdiction, in this case the City of San Leandro, were to overrule the Land Use Commission by a two-thirds vote. Once the Commission has reviewed, elected not to review, or the local jurisdiction has overruled the Land Use Commission, the Commission would no longer have the authority to review individual projects permitted as a result of the proposed Project unless the Commission and the local jurisdiction determine that the Commission should continue to review individual projects in an advisory capacity.

Prior to taking action on a proposed amendment to a General Plan, local jurisdictions must submit a draft of the proposal to the Land Use Commission for review and approval in accordance with Section 21676(b) of the Public Utilities Code. General Plan amendments in the airport influence area must be found to be consistent with the Land Use Plan, consistent with conditions or modifications, or the Land Use Commission may find that the proposed General Plan amendment is inconsistent with the policies of the Land Use Plan.

The policies of the Land Use Plan related to land use compatibility are contained in Section 3 of the Land Use Plan and are related to topic areas including noise, safety, airspace protection, and overflight. Each of the sections of the Land Use Plan describing policies related to these topic areas include specific compatibility review criteria. For noise, the criteria are shown on a noise contour map and table which specify the maximum allowable interior and exterior noise levels that can be experienced by adjacent uses. For safety, the location of potential projects in relation to runways would be evaluated and among other factors, whether or not a project site is included in a Safety Compatibility Zones factors into this determination. Regarding airspace protection, the Land Use Commission has adopted FAR part 77, *Objects Affecting Navigable Air Space*, which defines areas where height restrictions may be necessary to minimize impacts to airport operations. As such, policies in the Land Use Plan rely on Federal Aviation Administration (FAA) regulation. Proponents of a project that may exceed the elevation of a FAR part 77 surface must notify the FAA as required by FAR Part 77, Subpart B, by the State Aeronautics Act, and by Public Utilities Code Sections 21658 and 21659. Finally, with respect to overflight, unlike the other topic areas, overflight policies do not control how land can be developed but rather contain notification requirements for potential residents which would be impacted by overflight noise.

The Land Use Commission review criteria would ensure that upon approval there are no direct conflicts between the Land Use Plan and a proposed General Plan amendment. In order to provide an adequate basis for the evaluation of consistency between a proposed General Plan amendment and the Land Use Plan local jurisdictions have a few options on how to satisfy these requirements: The General Plan amendment must contain sufficient detail (with the compatibility criteria specified in the Land Use Plan identified), the Land Use Plan can be adopted by reference, or the General Plan amendment must indicate that all major land use actions, as listed in Section 2.6.2 of the Land Use Plan, or otherwise agreed to by

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the Land Use Commission, shall be referred to the Land Use Commission for review in accordance with the policies of Section 2.7.5 of the Land Use Plan.

Local Plans and Ordinances

San Leandro General Plan

The City of San Leandro General Plan was adopted in 2002 and contains a vision for San Leandro through the year 2015 including policies and actions to help achieve that vision. The San Leandro General Plan identifies the Project site as a Focus Area and refers to the Marina as the “crown jewel” of the City’s park system. Additionally, the Plan envisions the Marina as a community focal point, a place for family gatherings and celebrations, as well as a haven for business travelers. Goal 9 of the Land Use Element calls for the City to recognize and take advantage of the unique business amenities offered by the San Leandro Marina area.¹³

A full list of San Leandro General Plan goals and policies relevant to the proposed Project are listed in Table 4.9-1. A consistency analysis is also provided in the table.

Climate Action Plan

The San Leandro Climate Action Plan (CAP) was adopted in 2009. The Plan includes a series of goals and policies intended to help the City meet the greenhouse gas (GHG) reduction target of 25 percent below 2005 emissions levels by 2020.¹⁴

Bicycle and Pedestrian Master Plan

The Bicycle and Pedestrian Master Plan, updated in 2010, contains goals and policies which are intended guide the development of the bicycle and pedestrian network. These policies include those that encourage natural and man-made corridors including shorelines to be used for the alignment of future multi-use trails. A description of the Bicycle and Pedestrian Master Plan, including the existing bicycle and pedestrian facilities, can be found in the Traffic Impact Analysis prepared for the proposed Project, included as Appendix H of this Draft EIR.

City of San Leandro Municipal Code

The City of San Leandro Municipal Code Zoning Code implements the land use goals and policies established in the San Leandro General Plan. The Zoning Ordinance identifies specific zoning districts within the city and describes the development standards that apply to each district.

¹³ City of San Leandro, *San Leandro General Plan*, Land Use Element, Chapter 3.3, Business and Industry, Focus Areas.

¹⁴ City of San Leandro, *Climate Action Plan*, 2009.

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TABLE 4.9-1 POLICY CONSISTENCY – SAN LEANDRO GENERAL PLAN GOALS AND POLICIES

Goal or Policy No.	Goals and Policies	Determination of Project Consistency
Land Use Element		
Policy 1.08	Maintain and enforce high standards of maintenance and property upkeep after multi-family housing projects are completed and occupied.	Consistent. The Project would include a development agreement between the City and the Project applicant, that once the residential component of the Project is completed and occupied, high standards of maintenance and property upkeep are required through Covenants, Conditions and Restrictions (CC&Rs).
Policy 1.11	Protect residential neighborhoods from the encroachment of incompatible non-residential uses and disruptive traffic, to the extent possible. Zoning and design review should ensure that compatibility issues are fully addressed when non-residential development is proposed near or within residential areas.	Consistent. The Project would include non-residential development in proximity to existing residential uses, however: the non-residential development would be complementary to the existing and new residential land uses. Zoning and design review would serve to ensure that compatibility issues are adequately addressed.
Goal 2	Neighborhood Character- Preserve and enhance the distinct identities of San Leandro neighborhoods.	Consistent. To ensure the proposed development reflects the desires of the community at large, a 35- member Shoreline Development Citizens Advisory Committee (CAC) was established following an application process. Over 50 public meetings occurred, including Town Hall Meetings and Council work sessions to encourage public input. This opportunity for public input in addition to the public input allowed by the process of this EIR would serve to adequately preserve and enhance the surrounding neighborhood identities.
Policy 2.03	Promote improvements that make San Leandro neighborhoods more friendly to pedestrians and bicyclists, such as bike lanes, street trees, and crosswalks.	Consistent. As discussed above a variety of public amenities would be provided as a part of the proposed Project. Many of these amenities are centered around improvements intended for pedestrians and bicyclists including pedestrian piers, approximately 2 miles of public promenade, a natural shoreline element, a boardwalk/ lookout pier, and several dockside pedestrian lookout piers along the interior of the harbor.
Policy 2.05	Ensure that alterations, additions and infill development are compatible with existing homes and maintain aesthetically pleasing neighborhoods.	Consistent. To ensure the proposed development reflects the desires of the community at large, a Shoreline Development Citizens Advisory Committee (CAC) was established following an application process. Over 50 public meetings occurred, including Town Hall Meetings and Council work sessions to encourage public input. This opportunity for public input in addition to the public input provided by the process of this EIR would serve to adequately ensure that the proposed project is compatible with the existing homes in the area. Additionally, the Site Plan Review would ensure that the proposed Project is held to the same standards as the surrounding development, which would serve to maintain aesthetically pleasing neighborhoods.

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TABLE 4.9-1 POLICY CONSISTENCY – SAN LEANDRO GENERAL PLAN GOALS AND POLICIES

Goal or Policy No.	Goals and Policies	Determination of Project Consistency
Policy 2.08	Encourage residential alterations, additions, and new homes to be designed in a manner that respects the privacy of nearby homes and preserves access to sunlight and views. Wherever feasible, new or altered structures should avoid the disruption of panoramic or scenic views.	Consistent. The site and design review process would be adequate to ensure that the proposed Project respects the privacy of nearby homes and preserves access to sunlight and public access to views.
Policy 2.09	Ensure that adequate off-street parking is provided for new residential uses. Parking should be conveniently located but its visual prominence should be minimized.	Consistent. The proposed Project would provide the requisite amount of parking for the uses on site. Many of the spaces would be contained within a parking structure and all of the parking spaces on site would be in conformance with the standards outlined in the San Leandro Zoning Code.
Policy 2.12	Require useable open spaces for community use in large new residential developments. Wherever feasible, such spaces should contain play equipment, children’s activity areas, and other amenities that draw people outdoors, create street life, and instill a sense of community.	Consistent. Given that the residential component of the proposed Project would be adjacent to the many usable open spaces in the vicinity of the Marina including, the pedestrian pier, approximately 2 miles of public promenade, a natural shoreline element, a boardwalk/ lookout pier, several dockside pedestrian lookout piers along the interior of the harbor. These Project components would be adequate to instill a sense of community, create street life, and draw people outdoors.
Policy 2.13	Require new development to be harmonious with its natural setting and to preserve natural features such as creeks, large trees, ridgelines, and rock outcroppings.	Consistent. The Project site has a long history of development and few natural features exist on the site. The Project includes an enhanced natural shoreline feature which would promote the harmony between the proposed Project and its natural setting.
Policy 2.14	Focus new housing development on underutilized or infill sites on the city’s flatter lands, rather than on previously undeveloped sites in the hills. Development on sites with significant geologic, hydrologic, or land stability constraints should be strongly discouraged.	Consistent. The Proposed Project includes housing development and the site is relatively flat and is currently underutilized.
Policy 3.01	Encourage a mix of residential development types in the City, including single family homes on a variety of lot sizes, as well as townhomes, row houses, live-work units, planned unit developments, and multi-family housing.	Consistent. The proposed Project includes single family homes, townhomes as well as multifamily apartment units which would serve to contribute to the mix of residential development types in the City.
Policy 3.04	Encourage infill development on vacant or underused sites within residential areas.	Consistent. As discussed above, the proposed Project is largely surrounded by residential uses and is currently underutilized .

LAND USE AND PLANNING

TABLE 4.9-1 POLICY CONSISTENCY – SAN LEANDRO GENERAL PLAN GOALS AND POLICIES

Goal or Policy No.	Goals and Policies	Determination of Project Consistency
Policy 3.10	<p>Encourage the development of new housing on underutilized commercial and industrial sites which meet the following criteria:</p> <ul style="list-style-type: none"> ■ Sites on the edges of commercial or industrial areas, adjacent to established residential areas. ■ Sites where continued use with commercial or industrial activities could perpetuate existing land use conflicts. ■ Sites with adequate infrastructure, access, and road capacity. ■ Sites which are not constrained by external environmental factors, including freeway, railroad, and airport noise. ■ Sites where conflicts with surrounding uses would not be created in the event of re-use. ■ Sites which lack “prime” qualities for commercial or industrial development, such as direct freeway or rail access. ■ Publicly owned land which is not being used to its fullest potential. Sites meeting the above criteria should also be considered for churches, libraries, parks, community facilities, and other uses that provide necessary services and advance the quality of life in the community. 	<p>Consistent. As discussed above, the Project site is currently designated as General Commercial on the western portion of the site and would contain a housing component. The proposed Project would be consistent with virtually all of the relevant criteria, especially as airport noise would not constrain the provision of new housing.</p>
Policy 4.02	<p>Require new residential development to pay its fair share of the cost of capital improvements needed to serve that development.</p>	<p>Consistent. The Developer will be responsible for funding all infrastructure needs. The Project is subject to established City developer impact fees that would be adequate to ensure that the Project pays its fair share of the cost of capital improvements.</p>
Policy 4.03	<p>Promote collaborative, creative solutions between the public and private sectors to develop additional schools, parks, and other public facilities in the City.</p>	<p>Consistent. The proposed Project does not include improvements to schools; however, Chapter 4.12, Public Services and Recreation, found less-than-significant impacts with regards to schools. Additionally, the proposed Project is a collaborative effort between the applicant and the City and would result in a revitalized public facility; the Marina, library, and associated facilities.</p>
Policy 5.03	<p>Encourage the participation of individuals as well as organizations in the planning process, since organizations may not always reflect individual needs and opinions.</p>	<p>Consistent. The participation of the CAC and past public meetings as well as the public comment opportunities which are a part of the CEQA process would serve to satisfy consistency with this policy.</p>
Goal 7	<p>Industrial and Office Districts- Continue to develop a strong and healthy industrial and office employment base in the community.</p>	<p>Consistent. The proposed Project’s contribution of a 150,000 square foot office campus and 15,000 square foot conference center would help to add to the office employment base in the City.</p>

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TABLE 4.9-1 POLICY CONSISTENCY – SAN LEANDRO GENERAL PLAN GOALS AND POLICIES

Goal or Policy No.	Goals and Policies	Determination of Project Consistency
Policy 7.06	Encourage private reinvestment in vacant or underutilized industrial and commercial real estate to adapt such property to changing economic needs, including the creation of flex/office space.	Consistent. The applicant has worked in partnership with the City to redevelop the Marina which is one of the primary underutilized commercial properties in the city and the proposed Project components include office and conference center space.
Policy 7.07	Encourage business development that improves the City’s ability to provide the public with high-quality services and which minimizes increases in the tax burden for existing businesses and residents.	Consistent. The proposed Project would allow for the improvement of the Marina without increasing the tax burden on the citizens of the city of San Leandro.
Policy 7.09	Build upon the locational strengths and transportation features of West San Leandro to support the area’s continued development as a major industrial, technology, and office employment center. In accordance with the West San Leandro Plan, limit the encroachment of incompatible residential and retail uses into the area, and promote additional development and redevelopment with manufacturing, technology, warehouse and distribution, office/flex, and similar uses.	Consistent. While the proposed Project does not include industrial development it does include a substantial office component. Moreover, Goal 9 and the policies under that goal call for the Marina area to take advantage of the unique business amenities offered by the area including making the site a destination for visitors, and promoting development that is compatible with the area’s scenic and recreational qualities.
Policy 8.08	Aggressively pursue the development of additional hotels, lodging, and conference facilities in the City.	Consistent. As described above, the Project would include a 200 room hotel as well as 15,000 square feet of conference facilities.
Goal 9	Marina and Shoreline- Recognize and take advantage of the unique business amenities offered by the San Leandro Marina area.	Consistent. The proposed Project would revitalized the currently underutilized San Leandro Marina.
Policy 9.01	Maintain an ongoing dialogue with residents of neighborhoods adjacent to the Marina to address traffic, noise, and other issues associated with Marina operations and future development. Early and frequent opportunities for neighborhood input should be provided in Marina development decisions.	Consistent. The participation of the CAC and numerous public meetings, including meetings with local Homeowners Associations and the public comment opportunities which are a part of the CEQA process would serve to satisfy consistency with this policy.
Policy 9.02	Enhance the San Leandro Marina area as a distinguished recreational shoreline, with complementary activities that boost its appeal as a destination for San Leandro residents and visitors.	Consistent. The proposed Project would include recreational and entertainment components which would improve its appeal as a destination for both residents and visitors.
Policy 9.03	Capitalize upon the Marina’s potential to attract and support water-oriented development. Future projects should be compatible with the area’s scenic and recreational qualities.	Consistent. It is intended that the future harbor basin would be accessible for non-motorized water craft. As such, a small boat launch is included as a Project component. Additionally, site and design review of the proposed Project would ensure the compatibility of the Project with its surroundings.

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TABLE 4.9-1 POLICY CONSISTENCY – SAN LEANDRO GENERAL PLAN GOALS AND POLICIES

Goal or Policy No.	Goals and Policies	Determination of Project Consistency
Policy 9.04	Encourage future uses and activities at the Marina which provide the revenue necessary to enable continued operation and maintenance of the boat berthing, basin, channel, landside, and other related facilities. These activities could include ferry service between San Leandro and other cities around the Bay.	Consistent. Part of the intent of the proposed Project is to allow for funding to redevelop the boat harbor basin. The proposed Project would remove the existing docks given existing operations of berthing are not sufficient to provide the revenue necessary to maintain the basin. However, the proposed Project would redevelop the San Leandro Shoreline to provide expanded and enhanced opportunities for landside activities as a result of new restaurants, hotel and conference center, and office space
Policy 9.06	Encourage “gateway” improvements which enhance the approach routes to the Marina while minimizing the impacts of increased traffic on area neighborhoods. Improvements could include new signage, streetscape enhancement along Marina Boulevard and Fairway Drive, entry monuments and landscaping at the Marina itself, and longer-term circulation changes.	Consistent. The Project would include landscaping and roadway improvements along Marina Boulevard signifying a gateway to the Marina. Improvements..
Policy 9.07	Encourage cohesive urban design and high-quality architecture at the Marina. Buildings should be oriented to maximize water views and shoreline access. Architecture, signage, lighting, street furniture, landscaping, and other amenities, should be coordinated to achieve an integrated design theme.	Consistent. Site and design review would adequately address views and design issues.
Policy 9.08	Promote improvements at the Marina which enhance pedestrian and bicycle circulation through the area, including public shoreline walkways and trail connections to adjacent regional parklands and neighborhoods.	Consistent. As discussed above, the proposed Project includes pedestrian piers, approximately 2 miles of public promenade, a natural shoreline element, a boardwalk/ lookout pier, and several dockside pedestrian lookouts in addition to the portion of the San Francisco Bay trail that goes through the Project site.
Goal 10	Land Use Compatibility- Ensure that commercial and industrial projects are attractively designed and are sensitive to surrounding areas.	Consistent. As discussed above in order to obtain Project approval, the proposed Project would be required to go through the site and design review process which would adequately account for compatibility issues.

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The Project site is zoned Commercial Recreation (CR) in the current zoning code. Uses allowed in this district without a conditional use permit include health and fitness centers, marine sales and services, retail sales, and travel services. Development regulations contained in the Zoning Code applicable to the CR zone include a maximum base Floor Area Ratio (FAR) of 0.3 and a maximum building height of 40 feet. The project proposes a rezoning to Community Commercial with a Planned Development overlay.

4.9.1.2 EXISTING CONDITIONS

As shown on Figure 4.9-2, the western portion of the site is designated as General Commercial (GC) while the eastern portion is designated for Parks and Recreation (PR). The Project site is zoned Commercial Recreation, as shown in Figure 4.9-3.

Surrounding Land Uses and Context

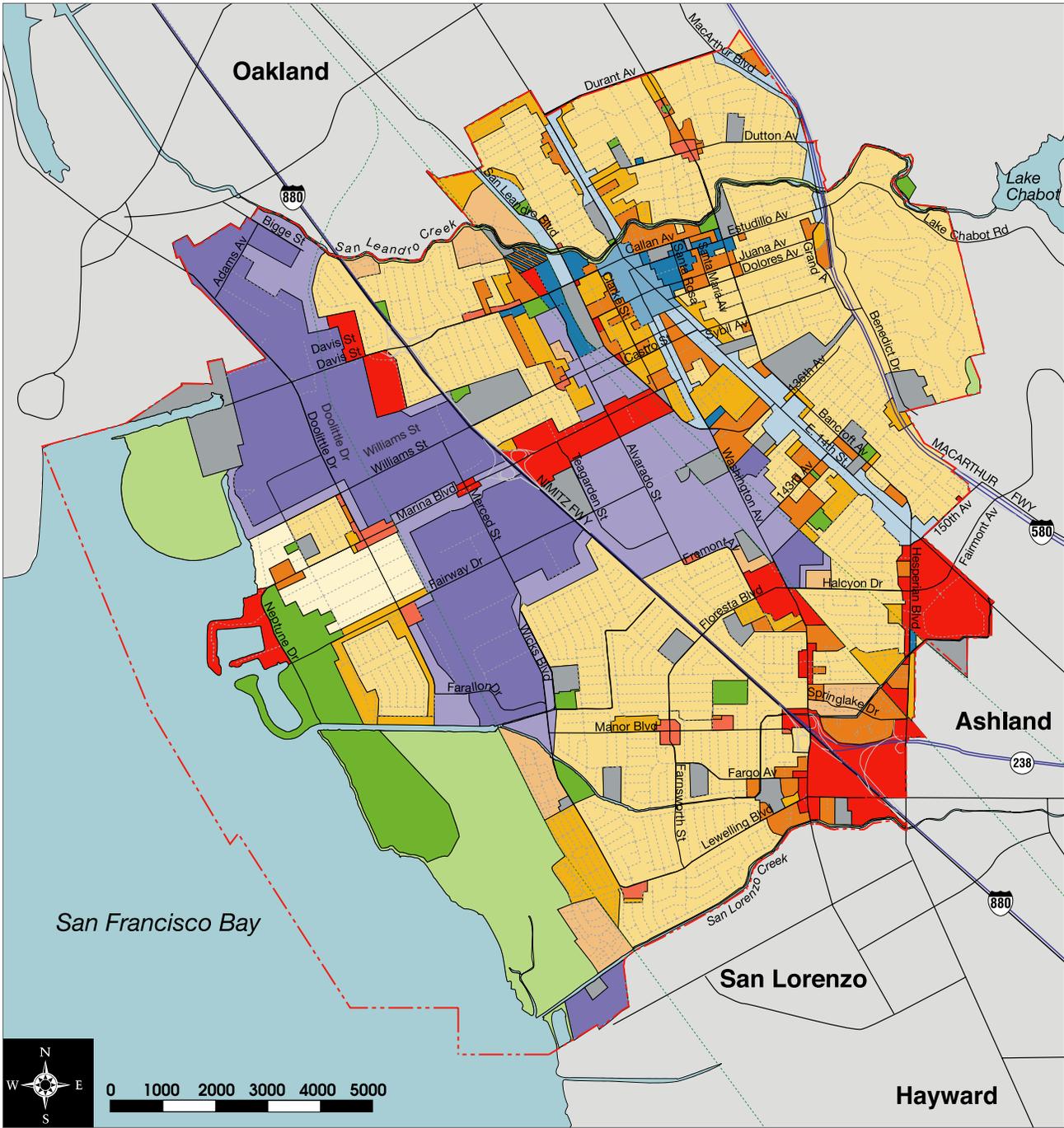
The Project site is directly bordered to the north and east by residential development, the majority of which is single- and two-family dwellings. The area further to the east includes industrial and commercial uses, including the new Kaiser Permanente San Leandro Medical Center. Further to the north are extensive industrial lands. The Oyster Bay Regional Shoreline is located approximately 0.3 miles to the northwest of the Project site. The Oakland International Airport is located less than 1 mile to the northwest of the Project site. Directly to the south lies the Tony Lema Golf Course which is also a part of the Monarch Bay Golf Club, and Marina Park. Marina Park includes a jetty, referred to as the Par Course, and a small boat lagoon that extends into the Bay, south of the Marina. Further to the south of the site lies 315 acres of restored marshland habitat and the Heron Bay residential development, and to the west, the San Francisco Bay.

Existing Uses on the Project Site

The Project site currently contains various recreation and marine uses including a harbor master's office, a 462-slip public harbor, two yacht clubs, the nine-hole Marina Golf Course, and a small park area at the southwestern portion of the site. A public boat launch ramp and parking lot are located on the south side of Pescador Point Drive. Commercial uses on the site are the 131-room The Marina Inn on San Francisco Bay, and two restaurants: Horatio's Restaurant which was completed in 1978, and an El Torito which was originally opened as part of the Tia Maria chain in 1970. The foundation and deck piers of the former Blue Dolphin Restaurant remain on-site; however, the building structure has been previously removed. Finally, at the easternmost portion of the site there is the existing Mulford-Marina branch public library. To accommodate these uses there are approximately 1,950 parking spaces throughout the Project site.



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Source: San Leandro General Plan Update, 2002.

Residential Categories

- Garden Density
- Low Density
- Low-Medium Density
- Medium Density
- High Density

Commercial Categories

- Neighborhood Commercial
- General Commercial
- Office
- Downtown Mixed Use
- Corridor Mixed Use

Industrial Categories

- Light Industrial
- General Industrial

Public/Open Space Categories

- Public/Institutional
- Parks and Recreation
- Resource Conservation

Figure 4.9-2
Land Use Map



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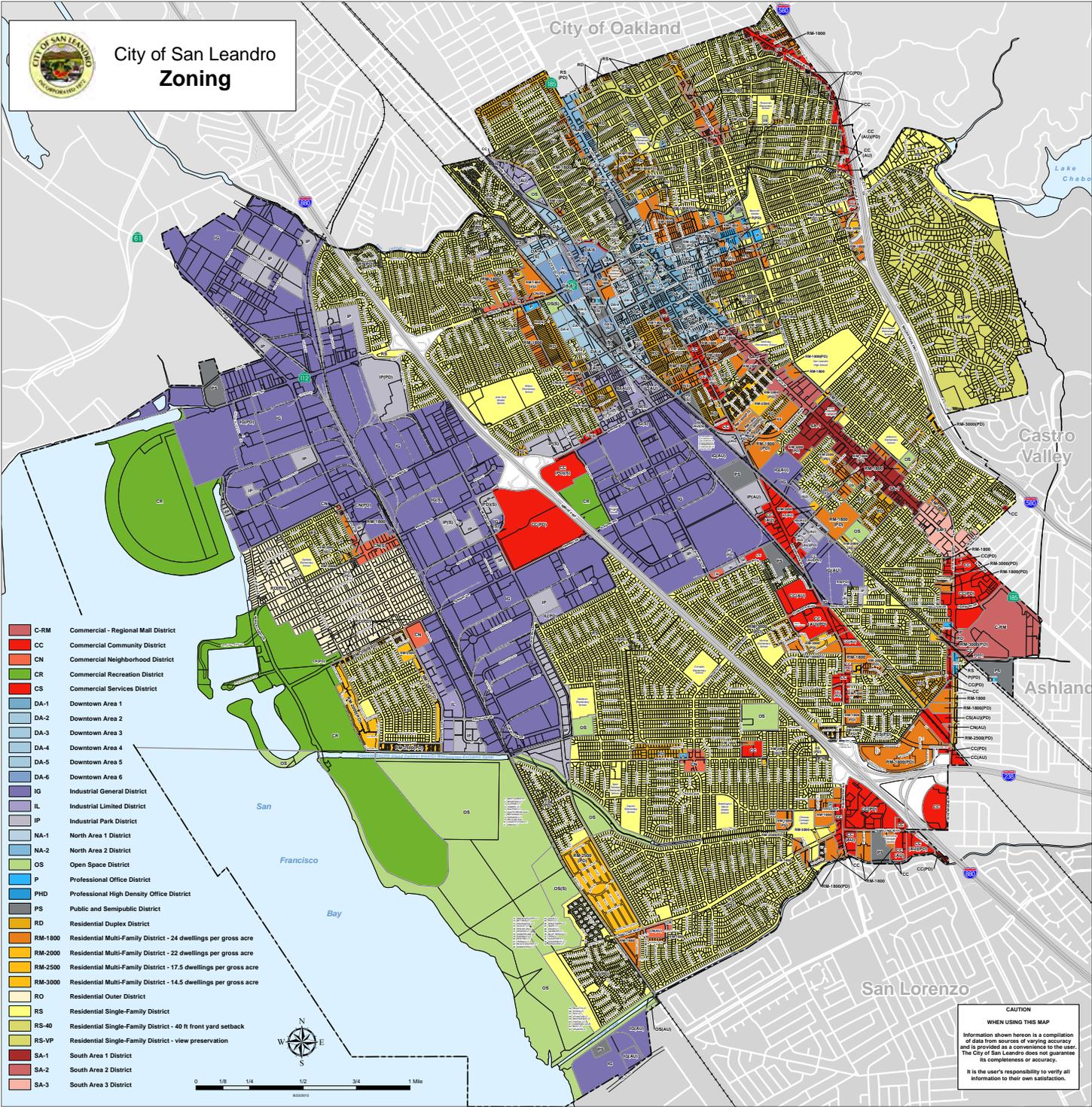


Figure 4.9-3
Zoning Map

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4.9.2 STANDARDS OF SIGNIFICANCE

In accordance with the thresholds in CEQA Guidelines Appendix G and the EIR preparers' professional judgment, the proposed Project would be considered to have a significant environmental impact with regard to land use if it would do any of the following:

1. Physically divide an established community.
2. 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.
3. Conflict with any applicable habitat conservation plan or natural community conservation plan.

In the context of criterion number 2, it should be noted that the proposed Project includes zoning and General Plan amendments, which are intended to eliminate conflicts with those governing regulations and policies. The proposed amendments are considered in light of other applicable regulations and policies.

4.9.3 IMPACT DISCUSSION

LAND-1 The Project would not physically divide an established community.

The proposed Project would have a significant environmental impact if it would create a barrier between portions of an established community. Typically, projects with the potential to divide an established community include the construction of major highways or roadways, construction of storm channels, closing bridges or roadways, or construction of utility transmission lines. The addition of 354 housing units, with an associated average maximum population increase estimate of 970 residents,¹⁵ would be new to the site and would have an impact on the circulation infrastructure in the vicinity. However, neither this nor any other aspect of the proposed Project would serve to create a barrier or spatially divide adjacent uses from one another. The extension of infrastructure and City services to this new development, in combination with the provision of new public amenities at the Marina and community-serving uses adequate to serve the magnitude of the increased intensity, would serve to seamlessly incorporate the proposed Project into the existing communities without dividing them. As it is, the communities that exist in the Marina are distinct yet form a well-defined community with shared concerns. The addition of the Project would be able to integrate into this framework and a *less-than-significant* impact would result.

Applicable Regulations:

- San Leandro General Plan
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.

¹⁵ This figure was calculated using the average household size reported in the 2010 Census. US Census Bureau, 2010 Census, Table DP-1

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LAND-2 The proposed Project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

As mitigated, the proposed Project would not conflict with any applicable land use plan, policy, or regulation, adopted for the purpose of avoiding or mitigating an environmental effect. The San Leandro General Plan is the primary planning document intended to guide the development of the Project site, but there are also several other plans, policies and regulations that are applicable to the Project site including the San Leandro Municipal Code, The San Francisco Bay Plan, the Oakland Airport Land Use Compatibility Plan, and the Association of Bay Area Governments Bay Trail Plan.

San Leandro General Plan

As discussed in Chapter 3, Project Description, the proposed Project would require a General Plan amendment to change the land use designation from existing where the western portion of the site is designated General Commercial and the eastern portion is designated as Parks and Recreation, to solely General Commercial for the entire site. The Parks and Recreation designation is intended for places used for active recreational purposes, including neighborhood, community, and regional parks, golf courses, and the recreational amenities at the San Leandro Marina.¹⁶ The General Commercial designation is characterized by large shopping centers, shopping districts, and commercial uses providing a broad range of goods and services and serving a broad market.¹⁷ Residential and recreational uses would be allowed under the General Commercial Land Use Category, with the corresponding zoning classification of CC Commercial Community.¹⁸ Because portions of the existing Marina Golf Course would be occupied by housing, a General Plan amendment is necessary for conformance with the San Leandro General Plan land use map and text. This General Plan amendment is consistent with the spirit of the goals and policies that currently exist in the San Leandro General Plan. As listed above in the Environmental Setting portion of this chapter, Goal 9 of the Land Use Element calls for the City to take advantage of the unique business amenities offered by the San Leandro Marina area. Additionally, Policy 9.04 calls for the City to encourage future uses and activities at the Marina, which provide the revenue necessary to enable continued operation and maintenance of the boat berthing, basin, channel, landside, and other related facilities. Table 4.9-1 contains a listing of relevant San Leandro General Plan policies as well as analysis, evaluating whether or not the proposed Project is consistent with each policy.

San Leandro Municipal Code

The proposed Project proposes a rezone from Commercial Recreation (CR) to Commercial Community (CC) with a Planned Development Overlay. This entitlement along with site plan and landscape plan review would be reviewed and deliberated by the Planning Commission, which is the recommending body, and the City Council, which is the decision making body, in accordance with the San Leandro Municipal Code. Section 3-1008 of the Zoning Code outlines the procedures for rezone approval. Upon Project approval, the proposed Project would not conflict with the San Leandro Municipal Code and Zoning Code.

¹⁶ City of San Leandro, *San Leandro General Plan*, Land Use Element, page 3-16.

¹⁷ City of San Leandro, *San Leandro General Plan*, Land Use Element, page 3-11.

¹⁸ City of San Leandro, *San Leandro General Plan*, Land Use Element, Table 3-2, page 3-16.

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San Leandro Bicycle and Pedestrian Master Plan

As discussed in Section 4.13, Transportation and Traffic, the San Leandro Bicycle and Pedestrian Master Plan identifies proposed Class II bike lanes on Monarch Bay Drive, within the Project site. The Project would include the installation of Class II bicycle lanes on Monarch Drive between Neptune Drive and Fairway Drive; therefore, a *less-than-significant* impact would occur.

San Francisco Bay Plan

The requirements of the major permit from BCDC are described above in Section 4.9.1.1, Regulatory Framework. Although BCDC's review process for this permit would determine the Project's consistency with the San Francisco Bay Plan at the time of their review, in general, the proposed Project would be consistent with the overall goals of the San Francisco Bay Plan. As mentioned above, Objective 2 of the Bay Plan calls for developing the San Francisco Bay shoreline to its highest potential and should be used in a manner that would not adversely affect enjoyment of the Bay and shoreline by residents, employees, and visitors. The proposed Project would be consistent with Objective 2 by enhancing and expanding recreational and commercial activities at the Project site with the addition of new restaurants, hotel and conference center, office space, and enhanced public spaces, such as pedestrian piers.

In addition, Policy 1 of the Bay Plan calls for accessible and diverse water-oriented recreational facilities, such as marinas, launch ramps, beaches, and fishing piers. Given the proposed Project includes components, including pedestrian piers, dockside pedestrian lookouts, and non-motorized boat ramps, the proposed Project would be consistent with this policy.

Further, the Bay Plan includes policies related to the public access through the Public Access Design Guidelines, which is discussed below. Given the proposed Project would be consistent with overall objectives and policies of the San Francisco Bay Plan, impacts would be *less than significant*.

Bay Conservation and Development Commission Public Access Design Guidelines

BCDC's Public Access Design Guidelines provides a general framework for projects within the BCDC jurisdiction to maximize public access to the extent feasible. Recognizing that projects and locations of projects widely vary, the Public Access Design Guidelines do not necessarily provide specific design requirements, but rather includes seven objectives which would maximize public access in the context of a given project. For example, Public Access Design Guidelines objectives focus on making public access usable, compatible with wildlife, and improving the quality of visual access.

The proposed Project would be consistent with the Public Access Design Guidelines with enhancements such as dockside pedestrian lookout piers, pedestrian piers, new non-motorized boat launches, and improving public spaces throughout the Project site. Given that enhancements proposed by the Project would result in increased public access, the proposed Project would be consistent with BCDC's Public Access Design Guidelines; therefore, a *less-than-significant* would occur.

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San Francisco Bay Area Water Trail

As described above in Section 4.9.1.1, the San Francisco Bay Area Water Trail is an ongoing effort to promote recreational water access opportunities by improving connectivity of the San Francisco Bay throughout nine counties in the Bay Area, including Alameda County. In general, the Bay Area Water Trail program seeks to create a network of launch and landing sites for non-motorized boats and sail craft.

The Project would include the construction of new small boat/kayak launch on the interior of the marina, and include opportunities for additional water access from Pescador Point. In addition, improved water access would be provided by two docks along the outer marina at the southern end of the Project site. The existing boat ramp on the south side of Pescador point would not be modified as a result of this Project. Therefore, implementation of the Project would be consistent with the overall goal of the Bay Area Water Trail by providing a new non-motorized boat launch area and increasing connectivity to the San Francisco Bay. As such, a *less-than-significant* impact would occur.

Oakland Airport Land Use Compatibility Plan

As described above in Section 4.9.1.1 Regulatory Framework, the Project area is within the airport influence area of the Oakland International Airport which is less than one mile to the north of the Project site. As specified in the Land Use Plan, the Land Use Commission is authorized to review the Project for noise and safety compatibility, airspace protection, and aircraft over-flights. Please refer to the Chapter 4.7, Hazards and Hazardous Materials, with respect to safety hazards and the Project's proximity to the Oakland International Airport, Chapter 4.10, Noise, with respect to airport-generated noise, and Section 4.13, Transportation and Traffic, with respect to airspace operations.

Because the Project site is not located within one of seven Safety Zones established by the Land Use Plan, the primary area that the Land Use Commission will examine is the Project's conformance with Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Air Space*. Development projects that lie within FAR Part 77 areas are subject to review by the FAA for their potential effects on aircraft safety. Specifically, FAA considers the Project's potential light and glare could potentially distract aircraft operators. This would include compliance with all policies pertinent to the project site's location in the airport influence area. Potential light and glare impacts are addressed in Section 4.1, Aesthetics; no conflicts with the Land Use Plan are anticipated for the Project. Project approval by FAA would ensure that the Project would not conflict with the Land Use Plan. Therefore, this is considered a *less-than-significant* impact.

Association of Bay Area Governments Bay Trail Plan

Bay Trail policies and design guidelines are intended to complement, rather than supplant the adopted regulations and guidelines of local managing agencies, such as BCDC's Public Access Design Guidelines and/or City design and development guidelines. Enhancing connections of the Bay Trail and San Francisco Bay Area Water Trail would rely on the continued cooperation among shoreline property owners, the hundreds of local, regional, state, and federal agencies with jurisdiction over the trail alignment, the numerous trusts and foundations which operate in the region. The Bay Trail Plan contains policies concerning ensuring a feasible continuous trail around the Bay, minimizing impacts on and conflicts with sensitive environments, locating the trail close to the shoreline, providing a variety of views, as well as

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recognizing exceptional landscapes. The pedestrian improvements proposed as a part of the proposed Project, including the pedestrian promenade are consistent with the providing a continuous trail along the Bay. Therefore, this is a *less-than-significant* impact.

Applicable Regulations:

- San Leandro General Plan
- City of San Leandro Municipal Code
- The San Francisco Bay Plan
- Bay Conservation and Development Commission Public Access Design Guidelines
- Oakland Airport Land Use Compatibility Plan
- Association of Bay Area Governments Bay Trail Plan

Significance Before Mitigation: Less than significant.

LAND-3	The Project would not conflict with any applicable habitat conservation plan (HCP) or natural community conservation plan.
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There is currently no existing applicable HCP or natural community conservation plan that covers land within the City of San Leandro. Therefore, *no impact* would result in this respect.

Significance Before Mitigation: No impact.

4.9.4 CUMULATIVE IMPACT DISCUSSION

LAND-4	The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to land use and planning.
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This section analyzes potential impacts related to land use that could occur from a combination of the proposed Project with reasonably foreseeable growth in the surrounding area. Since the City of San Leandro is the government entity with jurisdiction over land use decisions within the city limits, the city limits of San Leandro are the extent of the area of cumulative effect for this analysis. Cumulative impacts would occur if development associated with the proposed Project together with cumulative growth would physically divide an existing community or conflict with applicable land use plans, policies, or regulations or with an adopted conservation plan. Table 4-1 in Chapter 4.0 of this Draft EIR contains the list of projects used to assess the impact of the proposed Project in combination with cumulative growth. The San Leandro General Plan and its implementing development procedures and standards provide a unifying, internally consistent program for development throughout the City. All development, including the Project and cumulative projects must be consistent with the General Plan; therefore, cumulative impacts would be *less than significant* regarding land use and planning.

While the Project would redevelop the San Leandro Shoreline, the Project would be required to maintain consistency with the goals and policies of the General Plan related to land use, as well as comply with applicable land use plans and/or regulations. As such, the Project impacts would result in a *less-than-significant* cumulative impact.

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Applicable Regulations:

- San Leandro General Plan
- City of San Leandro Municipal Code
- The San Francisco Bay Plan
- Bay Conservation and Development Commission Public Access Design Guidelines
- Oakland Airport Land Use Compatibility Plan
- Association of Bay Area Governments Bay Trail Plan

Significance Before Mitigation: Less than significant.

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4.10 NOISE

This chapter describes the regulatory framework and existing conditions in the vicinity of the Project related to noise, as well as the potential impacts of the Project on the noise environment. The chapter begins with a discussion of the fundamentals of sound and vibration, and an examination of relevant federal, State, and local guidelines, policies, and standards regarding noise and vibration. The remainder of the chapter provides an evaluation of the potential noise- and vibration-related environmental consequences of future development that could occur by adopting and implementing the Project. The supporting analysis considers noise levels at existing receptor locations; evaluates potential noise impacts associated with the Project; and provides mitigation to reduce noise impacts at noise-sensitive locations. Noise calculations on which this analysis is based are included in Appendix G, Noise Monitoring and Modeling Data.

4.10.1 ENVIRONMENTAL SETTING

4.10.1.1 BACKGROUND

Noise Descriptors

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.”

The following are brief definitions of terminology used in this section:

- **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.
- **Intrusive.** Noise that intrudes over and above the existing ambient noise at a given location. Relative intrusiveness depends on amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.
- **Decibel (dB).** A unit-less 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.
- **Ambient Noise Level.** The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
- **Equivalent Continuous Noise Level (L_{eq}).** The mean of the noise level (or energy) averaged over the measurement period.
- **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

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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 to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

Characteristics of Sounds

When an object vibrates, it radiates part of its energy as acoustical pressure in the form of a sound wave. Sound can be described in terms of amplitude (loudness), frequency (pitch), and duration (time). The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate the human, frequency-dependent response, the A-weighted filter system is used to adjust measured sound levels. The normal range of human hearing extends from approximately 0 dBA (the threshold of detection) to 140 dBA (the threshold of pain).

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale to better account for the large variations in pressure amplitude (the above range of human hearing, 0 to 140 dBA, represents a ratio in pressures of one hundred trillion to one). All noise levels in this study are relative to the industry-standard pressure reference value of 20 micropascals. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 4.10-1 presents the subjective effect of changes in sound pressure levels.

Sound is generated from a source; the decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as spreading loss or distance attenuation.

TABLE 4.10-1 CHANGE IN APPARENT LOUDNESS

± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies and Hansen, 2009.

When sound is measured for distinct time intervals, the statistical distribution of the overall sound level during that period can be obtained. For example, L_{50} is the noise level that is exceeded 50 percent of the time. Similarly, the L_{02} , L_{08} , and L_{25} values are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. The energy-equivalent sound level (L_{eq}) is the most common parameter associated with community noise measurements. The L_{eq} metric

is a single-number noise descriptor of the energy-average sound level over a given period of time. An hour is the most common period of time over which average sound is measured, but it can be measured over any duration. Other values typically noted during a noise survey are the L_{\min} and L_{\max} . These values are the minimum and maximum root-mean-square (RMS) noise levels obtained over the stated measurement period.

Since sensitivity to noise increases during the evening and at night, when excessive noise can interfere with relaxation and/or the ability to sleep, 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. Because of this increased sensitivity to unwanted noise intrusion during the evening and nighttime hours, State law requires, for planning purposes, that this increased noise sensitivity be accounted for. The Day/Night Average Sound Level, L_{dn} , is a measure of the cumulative noise exposure in a community, with a 10 dB addition to nocturnal (10:00 p.m. to 7:00 a.m.) noise levels. The Community Noise Equivalent Level (CNEL) is a similar 24-hour cumulative measure of noise; however it differs slightly from L_{dn} in that 5 dB is added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system; prolonged noise exposure in excess of 75 dBA increases body tensions, thereby affecting blood pressure and functions of the heart and nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less-developed areas. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level (SPL) number means. To help relate noise level values to common experience, Table 4.10-2 shows typical noise levels from noise sources.

Causes for annoyance include interference with speech, radio, television, and sleep and rest, as well as induced structural vibrations. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. The threshold for annoyance from vehicle noise is about 55 dBA L_{dn} . At an L_{dn} of about 60 dBA, approximately 8 percent of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the highly annoyed proportion of the population increases to about 20 to 25 percent. There is, therefore, an increase of about 2 percent per decibel of increased noise between an L_{dn} of 60 to 70 dBA. The thresholds for speech interference indoors are approximately 45 dBA for continuous noise and approximately 55 dBA for fluctuating noise. Outdoors the thresholds are roughly 15 dBA higher. Steady noise above 35 dBA and fluctuating noise levels above roughly 45 dBA have been shown to affect sleep.

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TABLE 4.10-2 TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet, at 50 miles per hour		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Bies and Hansen, 2009.

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. Vibration displacement is the distance that a point on a surface moves away from its original static position. The instantaneous speed that a point on a surface moves is the velocity, and the rate of change of the speed is the acceleration. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure. These types of vibration are best measured and described in terms of velocity and acceleration.

The three main types of waves associated with groundborne vibrations are surface or Rayleigh waves, compression or P-waves, and shear or S-waves.

- Surface or Rayleigh waves travel along the ground surface. They carry most of their energy along an expanding cylindrical wave front, similar to the ripples produced by throwing a rock into a lake. The particle motion is more or less perpendicular to the direction of propagation.
- Compression or P-waves are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal, in a push-pull motion. P-waves are analogous to airborne sound waves.
- Shear or S-waves are also body waves, carrying their energy along an expanding spherical wave front. Unlike P-waves, however, the particle motion is transverse, or perpendicular to the direction of propagation.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the RMS velocity. PPV is the maximum instantaneous peak of the vibration signal and RMS is the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response.

The units for PPV and RMS velocity are normally inches per second (in/sec). Often, vibration is presented and discussed in dB units in order to compress the range of numbers required to describe the vibration. In this study, all PPV and RMS velocity levels are in in/sec and all vibration levels are in dB relative to 1 micro-inch per second (abbreviated as VdB). Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Even the more persistent Rayleigh waves decrease relatively quickly as they move away from the source of the vibration. Man-made vibration problems are, therefore, usually confined to relatively short distances (500 to 600 feet or less) from the source.

Effects of Vibration

Table 4.10-3 displays human annoyance and the effects on buildings resulting from continuous vibration. As discussed previously, annoyance is a subjective measure and vibrations may be found to be annoying at

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much lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons exposed to elevated ambient vibration levels such as people in an urban environment may tolerate a higher vibration level.

TABLE 4.10-3 REACTION OF PEOPLE AND DAMAGE TO BUILDINGS FOR CONTINUOUS/FREQUENT INTERMITTENT VIBRATION LEVELS

Velocity Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.02	Barely perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Virtually no risk of damage to normal buildings
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential dwellings such as plastered walls or ceilings
0.5	Severe – Vibrations considered unpleasant	Threshold at which there is a risk of damage to newer residential structures

Source: Transportation- and Construction-Induced Vibration Guidance Manual, California Department of Transportation, June 2004

Human response to ground vibration has been correlated best with the velocity of the ground. The velocity of the ground is expressed on the decibel scale. The reference velocity is 1×10^{-6} inch/second RMS, which equals 0 VdB, and 1 inch/second equals 120 VdB. The abbreviation “VdB” is used in this document for vibration decibels to reduce the potential for confusion with sound decibels. One of the problems with developing suitable criteria for groundborne vibration is the limited research into human response to vibration and, more importantly, human annoyance inside buildings. The U.S. Department of Transportation, Federal Transit Administration has developed rational vibration limits that can be used to evaluate human annoyance to groundborne vibration. These criteria are primarily based on experience with rapid transit and commuter rail systems, and are discussed in greater detail in the regulations section of this document.

Railroad and transit operations are potential sources of substantial ground vibration depending on distance, the type and the speed of trains, and the type of track. Trains generate substantial vibration due to their engines, steel wheels, heavy loads, and wheel-rail interactions.

Construction operations generally include a wide range of activities that can generate groundborne vibration, which varies in intensity depending on several factors. In general, blasting and demolition of structures, as well as pile driving and vibratory compaction equipment generate the highest vibrations. Because of the impulsive nature of such activities, the use of the peak particle velocity descriptor (PPV) has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans. Vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible amounts of vibration at up to 200 feet. Heavy trucks can also generate groundborne vibrations, which can vary, depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, differential settlement of pavement, etc., all increase the vibration levels from vehicles passing over a road surface.

Construction vibration is normally of greater concern than vibration from normal traffic flows on streets and freeways with smooth pavement conditions.

“Architectural” damage can be classified as cosmetic only, such as minor cracking of building elements, while “structural” damage may threaten the integrity of a building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher and there is no general consensus as to what amount of vibration may pose a threat for structural damage to a building. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is in a high state of disrepair and the construction activity occurs immediately adjacent to the structure. Table 4.10-4 shows the criteria established by the Federal Transit Administration (FTA) for the likelihood of structural damage due to vibration.

TABLE 4.10-4 GROUNDBORNE VIBRATION CRITERIA: ARCHITECTURAL DAMAGE

Building Category		PPV (in/sec)	L _v (VdB) ^a
I.	Reinforced concrete, steel, or timber (no plaster)	0.5	102
II.	Engineered concrete and masonry (no plaster)	0.3	98
III.	Non-engineered timber and masonry buildings	0.2	94
IV.	Buildings extremely susceptible to vibration damage	0.12	90

^a RMS velocity calculated from vibration level (VdB) using the reference of one micro-inch/second.
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006.

Noise- and Vibration-Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration, including residential, school, and open space/recreation areas where quiet environments are necessary for enjoyment, public health, and safety. Sensitive receptors within the City of San Leandro 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 which are likely to be disturbed by noise, such as reading, studying, sleeping, resting, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not considered noise- and vibration-sensitive receptors for the purposes of this analysis, since noise- and vibration-sensitive activities are less likely to be undertaken in these areas, and because these uses often themselves generate noise in excess of what they receive from other uses.

4.10.1.2 REGULATORY FRAMEWORK

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. This section describes the regulatory framework related to noise and vibration in the vicinity of the Project site.

State of California Noise Standards

The State of California, through its General Plan Guidelines, discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally

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acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels expressed in CNEL. These land use compatibility guidelines are shown in Table 4.10-5. These same State land use noise compatibility standards remain in place today.

State of California Building Code

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, California Building Code. These noise standards are applied to new construction in California for the purpose of ensuring that the level of exterior noise transmitted to and received within the interior living spaces of buildings is compatible with their comfortable use. For new residential dwellings, hotels, motels, dormitories, and school classrooms, the acceptable interior noise limit for new construction is 45 dBA CNEL or L_{dn} . Title 24 requires acoustical studies for development in areas exposed to more than 60 dBA CNEL to demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. Where exterior noise levels are projected to exceed 60 dBA CNEL or L_{dn} at the façade of a building, a report must be submitted with the building plans describing the noise control measures that have been incorporated into the design of the Project to meet the 45 dBA noise limit.

City of San Leandro Noise Standards

San Leandro Noise Element

The City of San Leandro General Plan, which was adopted in May 2002, contains policies related to noise in its Environmental Hazards Chapter. The relevant goal and policies are listed in Table 4.10-6.

San Leandro Municipal Code

Chapter 4-1 of the City's Municipal Code provides additional provision for restrictions and regulations for noise within the City of San Leandro. The following regulations are provided in the City's Municipal Code which addresses construction and stationary operational noise.

4-1-1115 Prohibited Acts.

(b) Construction-related Noise Near Residential Uses. Construction work or related activity which is adjacent to or across a street or right of way from a residential use, except between the hours of 7 a.m. and 7 p.m. on weekdays, or between 8 a.m. and 7 p.m. on Sunday and Saturday. No such construction is permitted on Federal holidays. As used in this Article, "construction" shall mean any site preparation, assembly, erection, substantial repair, alteration, demolition or similar action, for or on any private property, public or private right-of-way, streets, structures, utilities, facilities, or other similar property. Construction activities carried on in violation of this Article may be enforced as provided in Section 4-11-1130, and may also be enforced by issuance of a stop work order and/or revocation of any or all permits issued for such construction activity.

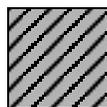
TABLE 4.10-5 CALIFORNIA LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

Land Uses	CNEL (dBA)					
	55	60	65	70	75	80
Residential – Low Density Single-Family, Duplex, Mobile Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Multiple Family	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Transient Lodging, Motels, Hotels	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Arena, Outdoor Spectator Sports	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Office Buildings, Businesses, Commercial and Professional	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agricultural	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable



Normally Acceptable:

Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



Normally Unacceptable:

New construction or development should generally be discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



Conditionally Acceptable:

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



Clearly Unacceptable:

New construction or development generally should not be undertaken.

Source: Governor’s Office of Planning and Research, General Plan Guidelines, November 2003.

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TABLE 4.10-6 SAN LEANDRO GENERAL PLAN GOAL AND POLICIES

Goal/Policy Number	Goal/Policy Text
Chapter 6 Environmental Hazards	
Goal 35	Noise Compatibility: Ensure that noise associated with the day-to-day activities of San Leandro residents and businesses does not impede the peace and quiet of the community.
Policy 35.01	Noise Compatibility Table : Ensure that potential noise impacts are considered when new development is proposed. Projects that could significantly increase noise levels should incorporate mitigation measures to reduce such impacts. Apply the standards shown in Table 6-1 of the Noise Element of the San Leandro General Plan (refer to Table 4.10-7 of this Draft EIR) when evaluating applications for future development. Table 6-1 (Table 4.10-7 of this Draft EIR) specifies the maximum noise levels that are normally acceptable, conditionally acceptable, and normally unacceptable for new development.
Policy 35.02	Residential Interior Noise Standard: As required by the State of California, ensure that interior noise levels in new residential construction do not exceed 45 dB L _{dn} . For non-residential construction, the acceptable interior noise levels should be determined on a case by case basis, depending on the type of activity proposed.
Policy 35.03	Residential Exterior Noise Standard: Strive to maintain an exterior noise level of no more than 60 dB L _{dn} in residential areas. Recognizing that some San Leandro neighborhoods already exceed this noise level, encourage a variety of noise abatement measures that benefit these areas.
Policy 35.04	Degradation of Ambient Noise Levels: If a neighborhood is well within acceptable noise standards, do not automatically allow noise levels to degrade to the maximum tolerable levels shown in Table 6-1 (Table 4.10-7 of this Draft EIR). A project's noise impacts should be evaluated based on the potential for adverse community response, as well as its conformance to the adopted standards. For CEQA purposes, an increase of 3 dB L _{dn} should generally be considered a significant adverse impact.
Policy 35.05	Noise-Sensitive Uses: Discourage noise-sensitive uses such as hospitals, schools, and residential units from locating in areas with very high noise levels. Conversely, discourage new uses likely to produce high levels of noise from locating in areas where noise-sensitive uses would be impacted.
Policy 35.06	Minimizing Noise in New Housing Areas: In the event that new housing is constructed in areas that exceed normally acceptable noise levels, require project design and construction measures that minimize noise intrusion.
Policy 35.07	Noise Reduction Measures: Encourage local businesses to reduce noise impacts on the community by replacing excessively noisy equipment and machinery, applying noise-reduction technology, and following operating procedures that limit the potential for conflicts.
Policy 35.08	Responding to Noise Problems: Continue to respond promptly and effectively to local noise complaints and noise problems, enforcing City codes and ordinances as necessary to ensure that a peaceful environment is maintained.
Policy 36.03	Site Planning and Building Design: Require new development or redevelopment near freeways, arterials, BART, and major bus routes to incorporate site planning and architectural design measures that reduce the exposure of future building occupants to traffic noise.

Source: San Leandro General Plan, 2002, Chapter 6, Environmental Hazards.

(c) *Conflicts with Residential Uses.* Subject to the restrictions on constructions contained in subdivision (b), the sustained operation or use between the hours of 9 p.m. and 8 a.m. of any electric or gasoline powered motor or engine or the repair, modification, reconstruction, testing or operation of any automobile, motorcycle, sweeper, vacuum, public address system, whistle muffler, motorized scooter, machine or mechanical device or other contrivance or facility unless such motor, engine, automobile, motorcycle, sweeper, vacuum, public address system, whistle muffler, motorized scooter, machine or mechanical device is enclosed within a sound insulated structure so as to prevent noise and sound from being plainly audible from any residential property line.

TABLE 4.10-7 NOISE COMPATIBILITY STANDARDS FOR SAN LEANDRO LAND USES

Land Use Type	Exterior Noise Exposure (Ldn or CNEL, dB)						
	>55	55-60	60-65	65-70	70-75	75-80	>80
Single- and Multi-Family Residential, and Mobile Homes	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable
Schools, Libraries, Museums, Hospitals, Personal Care	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable
Offices, Retail/Service Commercial, Restaurants, Hotels/Motels	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable
Auditoriums, Concert Halls, and Amphitheatres	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable
Industrial and Manufacturing within 500 feet of a residentially zoned area	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable
Other Industrial and Manufacturing	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable

- 
Normally Acceptable
 Specified land use is satisfactory, based on the assumption that any buildings involved are of conventional construction, without any special noise insulating requirements.
- 
Conditionally Acceptable
 Specified land use may be permitted only after detailed analysis of noise reduction and insulation requirements.
- 
Normally Unacceptable
 New development should generally not be undertaken because mitigation is usually not feasible.

Source: San Leandro General Plan, 2002, Chapter 6, Environmental Hazards.

(d) *Loud Music in Parks.* The use of electronic equipment, including but not limited to amplifiers, radio loudspeakers, phonographs, tape amplifiers, electronically operated or acoustic musical instruments or other device of like design used for producing sound in or upon any public street, park or grounds, or any other open area to which the public has access, whether publicly or privately owned, between the hours of 10 p.m. and 9 a.m. is unlawful. At any other time of day, such equipment may not be used in a manner which disturbs the peace, quiet and comfort of neighboring residents or persons of normal sensitivity who are using such areas. This subsection shall not apply to events for which a permit has been obtained pursuant to Chapter 4-20.

Vibration Standards

Neither the City of San Leandro nor the County of Alameda have specific and/or quantitative regulatory standards for construction or operational vibration sources. San Leandro Zoning Code Part IV, Article 16, Division 3, Provision 4-1670B, Vibration, requires that no use, activity, or process produce vibrations that are perceptible without instruments by a reasonable person at the property lines of a site. This performance standard applies to all land use classifications in all zoning districts.

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4.10.1.2 EXISTING CONDITIONS

This section describes the existing noise environment in the vicinity of the project site. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in most communities. Additional sources of noise in the vicinity of the project site include aircraft noise from Oakland International Airport and the Hayward Executive Airport, as well as industrial operations.

On-Road Vehicles

On-road vehicles, including cars, trucks, and buses, contribute substantially to the noise environment of the project site. The major roadways in the vicinity of the project site include Fairway Drive, Marina Boulevard, and Monarch Bay Drive. Marina Boulevard is a two- to-six-lane arterial road with a posted speed limit of 30 to 40 miles per hour. Within the project site, Marina Boulevard currently carries a daily traffic volume of approximately 5,000 vehicles on a typical weekday and 6,650 on a weekend. Fairway Drive is a two- to four-lane arterial road with a posted speed limit of 30 to 40 miles per hour. Within the project site, it currently carries a daily traffic volume of less than 2,500 vehicles on a typical weekday and weekend. Monarch Bay Drive is a two-lane collector road that extends between Marina Boulevard and the Estudillo Canal.

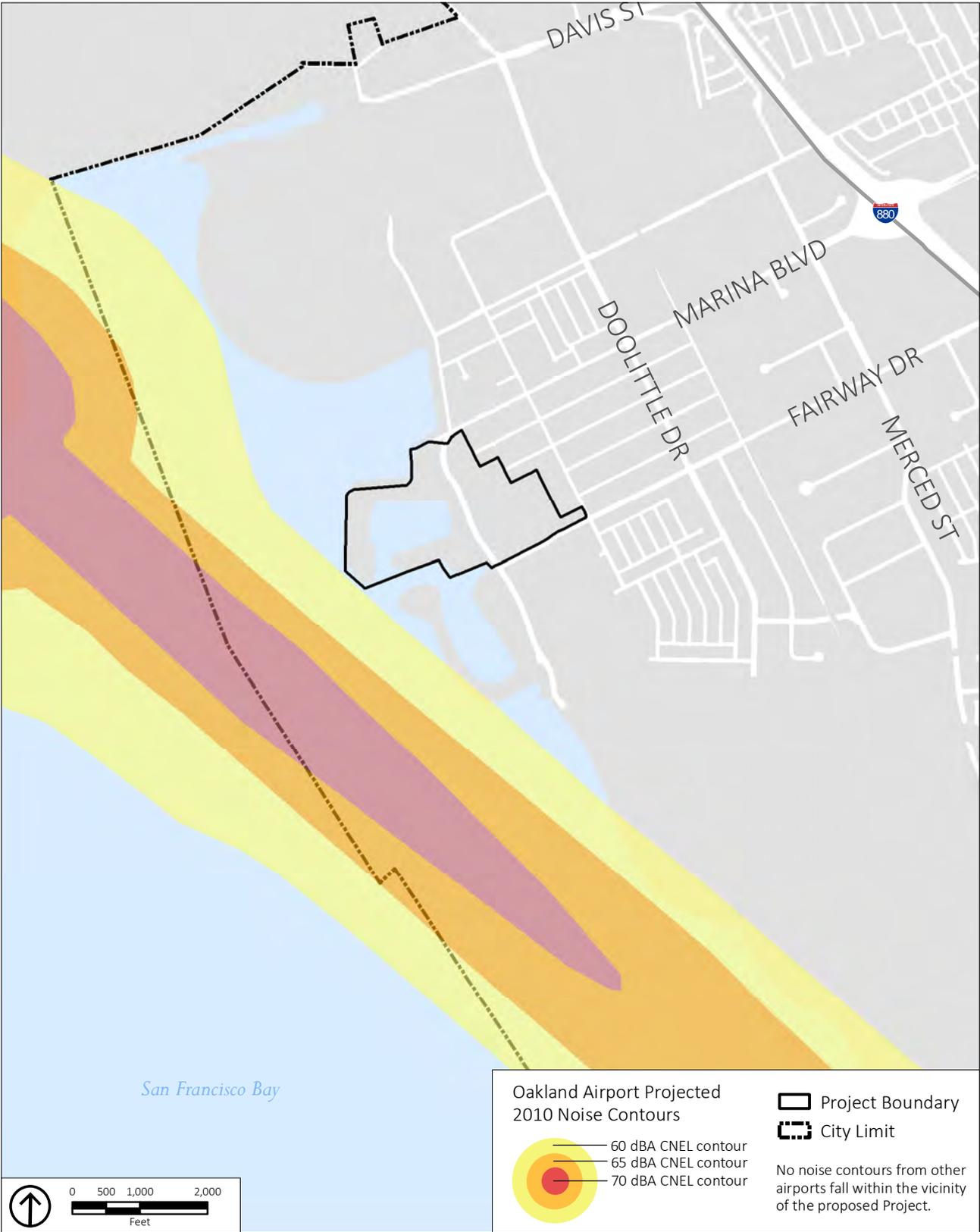
Aircraft Noise

The nearest airports to the project site are Oakland International Airport, which is located approximately one mile to the northwest, and the Hayward Executive Airport located approximately 3.5 miles to the southeast. The Project site is located outside the Hayward Executive Airport airport influence area, but it is located within the airport influence area of Oakland International Airport.

Figure 4.10-1 shows the project site boundaries, the San Leandro City Limit, and the noise contours for Oakland International Airport. As seen in Figure 4.10-1 only a small portion of the project site is located within the 60 dBA CNEL of the Oakland International Airport. The portion within the 60 dBA CNEL noise level contour would be located at the southwestern tip of the project site known as the end of Mulford Point, where the proposed 8,000-square-foot restaurant would be located. Impact Statement NOISE-3 discusses potential noise impacts with the proposed uses at the project site.

Other Sources of Noise

Stationary sources of noise typically emanate from commercial and industrial activities and equipment. Whereas mobile-source noise affects many receptors along an entire length of roadway, stationary noise sources typically affect areas adjacent to the uses. The nearest uses with the potential to generate audible noise levels are the industrial uses located 1,400 feet north of the Project site. These industrial uses include, but are not limited to, manufacturing, trucking, and metal works. Industrial noise is generated from heating, ventilation and air conditioning (HVAC) systems, loading dock activity, and processing machinery. Noise from industrial uses can be generated on a continual basis, or intermittently, depending on the processes and types of machinery involved. Based on measurements and audible observations taken at the site, industrial noise is not audible at the Project site due to distance and the intervening structures.



Source: Port of Oakland, 2006; City of San Leandro, 2014; PlaceWorks, 2014.

Figure 4.10-1
Airport Noise Level Contours

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Noise Measurements

Existing ambient noise levels were measured at seven locations in the vicinity of the project site to document representative noise levels at a variety of locations. Short-term (ST) noise level measurements were taken at six locations for a minimum period of 15 minutes during the daytime on Wednesday, July 16, 2014, all between the hours of 10:00 a.m. and 2:00 p.m. A long-term (LT) noise level measurement was taken at one location for a period of 24 hours beginning on Wednesday, July 16, 2014, and ending on Thursday, July 17, 2014. These dates were chosen to represent a typical weekday condition with fair weather that is representative of midweek ambient noise conditions, consistent with industry standard practice. The noise levels during both the short- and long-term measurements were measured using Larson-Davis Model 820 sound level meters, which satisfies the American National Standards Institute for Type 1 general environmental noise measurement instrumentation. The sound level meters and microphones were mounted on a tripod 5 feet above the ground and equipped with a windscreen during all short-term measurements. For the long-term measurement, the microphone and windscreen were attached to a tree and hidden from sight. The noise level measurement locations are shown on Figure 4.10-2 and the results are summarized in Table 4.10-8.

Long-Term Site 1

Site LT-1 represents the noise environment in the vicinity of the planned development sites in the northern portion of the Project, and captured noise generated by traffic and other activity along Monarch Bay Drive, activity in the El Torito Restaurant parking lot, pedestrian and bicycle activity, golf course activity, and flights landing at Oakland International Airport. Noise level data over a 24-hour period were acquired, beginning at 9:43 a.m. on Wednesday, July 16, 2014. At the start of the 24-hour measurement period, winds were from the southwest at 3 to 10 mph, and the air temperature was approximately 66.3°F. The 24-hour Day Night Noise Level (L_{dn}) at this location was 61.9 dBA. The highest and lowest hourly L_{eq} levels observed at this location were, respectively, 67.2 dBA during the period of 4:00 p.m. to 5:00 p.m., and 49.8 dBA during the 12:00 a.m. to 1:00 a.m. hour. A time history chart of the hourly data for Long-Term Location 1 is included in Appendix G.

Short-Term Site 1

Site ST-1 is located on the northwestern edge of Mulford Point, near the location of the proposed hotel. The existing land use at this short-term location is recreational. This location is also the closest of all short and long-term location sites to the arriving flight path at Oakland International Airport. This site was located on the west side of a parking lot adjacent to Mulford Point Drive, approximately 1,500 feet from the main traffic on Monarch Bay Drive.

The noise environment of Site ST-1 is characterized primarily by the sound of close traffic in the parking lot and along Mulford Point Drive, cyclists, pedestrians, idling airplanes at Oakland International Airport, and birds. Intermittent noise from airplanes landing at Oakland International Airport also contributed heavily to the sound profile. The 15-minute equivalent noise level at this location (L_{eq}) was 57.4 dBA.



Source: PlaceWorks, 2014; Esri, 2014.

- Short-Term Measurement Sites
- Long-Term Measurement Site
- Site Boundary

Figure 4.10-2
Noise Monitoring Locations

TABLE 4.10-8 NOISE LEVEL MEASUREMENTS

Monitoring Site	Location	Start Time	Wind Speed (mph)	Wind Dir.	Temp. (° F)	Lmin (dBA)	Leq (dBA)	Lmax (dBA)	CNEL (dB)
LT-1	El Torito Restaurant Parking Lot	9:43 a.m.	3-10	SW	66.3	—	—	—	62.2
ST-1	Northwestern Edge of Mulford Point	12:18 p.m.	1-2.5	W	76.5	42.5	57.4	72.5	—
ST-2	South of Pescador Point Drive	11:50 a.m.	1-2.5	NW	76.5	44.1	50.7	60.9	—
ST-3	South Golf Course Residential Development on Fairway Drive	1:00 p.m.	3-6	W	78.0	41.2	54.2	67.1	—
ST-4	Marina Boulevard Residential Area	10:20 a.m.	3.5-7	W	69.0	41.2	63.2	73.8	—
ST-5	Mulford Marina Branch Library	11:15 a.m.	1-2	SW	71.0	39.7	55.0	68.9	—
ST-6	Avenue 134 th Residential Area	10:50 a.m.	1-2	SW	69.7	37.3	47.5	67.7	—

Note: CNEL is used to express the average sound level over a 24-hour period. Therefore, it is not used in the 15-minute short-term measurements. Each measurement interval for the long-term measurement has a different L_{min}, L_{max}, and L_{eq}, which are used to calculate the CNEL. Therefore, these values are not listed in this table for the long-term measurement.

Source: Noise monitoring conducted by PlaceWorks between 10:20 a.m. and 1:15 p.m. on July 16, 2014, and between 9:27 a.m. July 16, 2014 and 10:00 a.m. on July 17, 2014.

Short-Term Site 2

Site ST-2 is located in the southwest area of the site, south of Pescador Point Drive. The site is used as a parking lot and boat launch, is adjacent to a scrap yard, and is in close proximity to the golf course and the Marina Inn. The microphone and sound meter were positioned approximately 150 feet from the centerline of Pescador Point Drive and approximately 270 feet from the centerline of Monarch Bay Drive, 150 feet north of the proposed development.

The noise environment of Site ST-2 is primarily characterized by the sound of passing traffic along Monarch Bay Drive and Pescador Point Drive, and golf course and boat launch activity. The noise environment was also punctuated by planes landing at Oakland International Airport. The 15-minute equivalent noise level at this location (L_{eq}) was 50.7 dBA.

Short-Term Site 3

Site ST-3 is representative of noise that could potentially be received by residents living in the South Golf Course Residential Development on Fairway Drive. The microphone and sound meter were positioned approximately 110 feet southwest of the intersection of Monarch Bay Drive and Fairway Drive. Measurements were taken at this location, just outside of the Project site boundary to avoid noise from heavy foot traffic in the immediate vicinity of the microphone and sound meter. The location southwest of the intended site was chosen because it was approximately equidistant from busy streets, was situated behind light trees and a small hill that mimicked the noise barrier caused by the tree line between the golf course and Fairway Drive, and because of a higher level of ambient noise similar to what could be expected by residents living within the golf course.

The noise environment of Site ST-3 is primarily characterized by the sound of traffic along Monarch Bay Drive, vehicles pulling into the parking lot, pedestrian activity, children in the nearby playground, and the

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golf course driving range. Intermittent noise from airplanes landing at Oakland International Airport was also audible. The 15-minute equivalent noise level (L_{eq}) at this location was 54.2 dBA.

Short-Term Site 4

Site ST-4 is representative of noise as received by the residential area immediately to the north of the Project site. This location was on Marina Boulevard approximately 25 feet from centerline, as well as 170 feet from Neptune Drive. The noise environment of Site ST-4 is primarily characterized by the sound of traffic along Marina Boulevard; the noise environment was also punctuated by airplanes landing at Oakland International Airport. The 15-minute equivalent noise level (L_{eq}) at this location was 63.2 dBA.

Short-Term Site 5

Site ST-5 is representative of noise as received by residential sites east of the Project site. Existing land uses in the vicinity of the location were single-family residential and commercial recreation. This location was on the northwest corner of Fairway Drive and Aurora Drive, approximately 30 feet from centerline of Aurora Drive, and 100 feet from the centerline of Fairway Drive. This location is on the eastern edge of the Project site, adjacent to the Mulford Marina Branch Library, which will be demolished and re-built as part of the Project.

Site ST-5 is primarily characterized by the sound of traffic along Fairway Drive and, to a lesser extent, Aurora Drive; temporary construction on Aurora Drive; light landscaping equipment from residences and the golf course maintenance building; and patrons entering and leaving the library. The 15-minute equivalent noise level (L_{eq}) at this location was 55.0 dBA.

Short-Term Site 6

Site ST-6 is representative of noise as received by residential uses east of the Project site. Site ST-6 was located front of 2620 West Avenue 134th, on the south side of the street, approximately 20 feet from centerline of West Avenue 134th, and approximately 60 feet from the borderline of the golf course.

The noise environment of Site ST-6 was characterized primarily by the sound of light winds, distant aircraft and traffic, light residential traffic on the street, nearby dogs, residents inside the houses, and occasional noise from people on the golf course. The 15-minute equivalent noise level (L_{eq}) at this location was 47.5 dBA.

4.10.2 STANDARDS OF SIGNIFICANCE

The Project would have a significant impact with regard to noise if it would result in any of the following:

1. Exposure of people to, or generation of, noise levels in excess of standards established in the General Plan or the Municipal Code, and/or the applicable standards of other agencies.
2. Exposure of people to, or generation of, excessive groundborne vibration or groundborne noise levels.
3. Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the Project.

4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the Project.
5. Exposure of people residing or working in the vicinity of the Project site to excessive aircraft noise levels, for a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport.
6. Exposure of people residing or working in the project site to excessive noise levels, for a project within the vicinity of a private airstrip.

4.10.3 IMPACT DISCUSSION

This section discusses the impacts of the project on the noise environment and on the perception of noise by sensitive receptors within and in the vicinity of the project site. This discussion is organized by and responds to each of the potential impacts identified in the Standards of Significance.

NOISE-1 The project would expose people to or generate noise levels in excess of standards established in the General Plan and/or the applicable standards of other agencies.

The Project would result in a significant impact if it would result in significant new noise sources to existing and future off-site receptors, or if it would develop sensitive noise uses that would expose persons to excessive noise.

Land Use Compatibility

Standards for noise generation and exposure in the Project site are determined primarily through the Land Use Noise Compatibility Guidelines shown in Table 4.10-5, as well as by the 60 dBA L_{dn} exterior, and the 45 dBA L_{dn} interior noise standards set by Policies 35.01, 35.02, and 35.03 of the City of San Leandro Noise Element. For the purpose of this analysis, the CNEL is the descriptor used as the airport and traffic data provided are based on this metric. It shall be noted that CNEL is actually is a stricter criteria. The Project components include a variety of uses, including residential dwellings, recreation, hotels, a conference center, offices, and restaurants. Placement of noise-sensitive uses (homes, the hotel) in close proximity to high-volume roadways and major airports could result in exposure of sensitive receptors to excessive levels of noise. None of the Project components would be located within close proximity to major roadways, and would not be located within the 65 dBA CNEL noise contour of the Oakland International Airport, which threshold is included in the Land Use Plan for the Oakland International Airport. As discussed in Section 4.10.1.3, traffic volumes along the major roads adjacent to and within the Project site have relatively low average daily traffic volumes and speeds. As discussed in Impact NOISE-3 below, the existing and future noise levels at the street adjacent to roadways in the study area segments of Marina Boulevard and Fairway Drive would range from 60.4 to 64.7 CNEL, which is greater than the 60 dBA CNEL General Plan standard. Therefore, as proposed noise-sensitive land uses would be located in proximity to roadways exposed to traffic noise levels greater than 60 dBA CNEL or L_{dn} , there would be the potential for exterior areas to be exposed to noise levels in exceedance of Policy 35.03 which strives to maintain exterior noise levels of no more than 60 dBA in residential areas. Due to the Project site's close proximity to roadway traffic, and Oakland International Airport, this is considered a *significant* impact.

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Impact NOISE-1: The Project would expose people to or generate noise levels in excess of standards established in the General Plan , and/or the applicable standards of other agencies.

Mitigation Measure NOISE-1A: The project applicant shall submit an acoustic study to the satisfaction of the City's Chief Building Official with the applications for site plan review and/or Tentative Map, whichever is earlier. The study shall demonstrate that all development meets applicable exterior noise standards and all new residences meet an interior noise level due to exterior noise of 45 dBA CNEL consistent with State and local noise standards. The acceptable interior noise levels for all non-residential construction will be determined based on a case-by-case basis according to the type of activity proposed. This is in accordance with General Plan Policy 35.02, Residential Interior Noise Standard. The study shall be based on precise grading and architectural plans including specific construction method details and materials to calculate the necessary exterior to interior noise reduction of approximately 20 dBA to achieve 45 dBA CNEL for residential construction. The precise exterior to interior reduction would be determined in the acoustical study when precise grading plans with building elevations, footprints and architectural plans are available. The applicant shall incorporate into the Project design all required noise insulation features and techniques necessary to reduce interior noise levels to achieve the interior noise standard. To achieve the required interior noise levels, features such as upgraded exterior wall and roof assemblies, upgraded windows, and exterior doors may be required.

Mitigation Measure NOISE-1B: All residential units of the Project shall include an alternative form of ventilation, such as noise-baffled passive air ventilation systems or mechanical air conditioning systems, that would allow windows to remain closed for prolonged periods of time to meet the interior noise standard of 45 dBA Ldn established by the City and the Uniform Building Code Requirements.

Significance After Mitigation: Less than significant.

Stationary Noise Impacts

Implementation of the Project would result in new residential, recreational and commercial development. The primary noise sources from these land uses are landscaping, maintenance activities, and air conditioning (HVAC) systems. In addition, the proposed hotels will have outdoor areas which may allow for outdoor activities and events, as will the waterside public amenities. Ball fields and an aquatic center would be located on the south side of Pescador Point, approximately 300 feet from the nearest future mixed use residential area and approximately ½-mile from the existing nearby homes. There would be no uses that have the potential to generate excessive noise levels such as soccer/baseball/football fields with bleachers for spectators, concert venues for outdoor music and performances, industrial equipment or processes and such. Noise generated by the Project uses would be normal and customary for the proposed uses and generally typical of noise from existing similar uses in the area. The Project uses would not be expected to exceed the General Plan noise exposure standards. This is a *less than significant* impact.

Once the Project is developed, sporadic noise from outdoor activities such as loud music at restaurants, boat engine noise near boat launches would be controlled by enforcement of the Municipal Code. Noise

complaints that may arise from persons generating noise within the site would be resolved through enforcement of Chapter 4-1 of the City's Municipal Code. This is a *less than significant* impact.

NOISE-2 The Project would have the potential to expose people to or generate excessive groundborne vibration or groundborne noise levels.

CEQA does not specify quantitative thresholds for what is considered “excessive” vibration or groundborne noise. Neither the City of San Leandro nor the County of Alameda establishes such thresholds. For the purpose of this analysis, a significant impact would occur if:

- Implementation of the Project would exceed PPV 0.1 inches/second, the criteria for being distinctly perceptible by humans as presented in Table 4.10-3, at off-site sensitive receptors.
- Implementation of the Project would result in vibration exceeding the criteria presented in Table 4.10-4 that could cause buildings architectural damage. For instance, for non-engineered timber and masonry buildings the criteria is 0.2 in/sec and for engineered concrete and masonry buildings the criteria is 0.3 in/sec.

There are no major sources of vibration in the vicinity of the project, nor would the project have equipment that could generate substantial levels of long-term groundborne vibration levels. The following discusses short-term construction vibration impacts from implementation of the Project.

Short-Term Construction Vibration Impacts

The anticipated construction phasing would depend on market conditions. At this time it is anticipated that the Project would be constructed in three phases as summarized in Section 3.4.2, Construction Phasing, of the Project Description. Construction vibration would vary temporally and geographically depending on the specific location and type of construction activity within the Project site. Construction activities will include demolition of existing structures and parking lots, site preparation work, foundation work, and building construction. Site preparation, excavation, and foundation work for individual sites within the Project site may last several weeks to months and, at times, may produce substantial vibration. The Project would require the removal of the several structures and features within the Project site such as the existing El Torito Restaurant building, the existing Mulford Branch Library, restrooms, and the San Leandro Yacht Club, among others. Pile driving could be required during construction to support building foundations.

The effect on buildings in the vicinity of a construction site varies depending on soil type, ground strata, and receptor-building construction. The results 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 structural damage at the highest levels. Vibration from construction activities rarely reaches levels that can damage structures, but groundborne vibration and groundborne noise can reach perceptible and audible levels in buildings that are very close to the construction site (such as for already-completed structures from previous phases in the project's development). This is especially true for grading activities, including bulldozers, that could cause a potential impact depending on their proximity to existing buildings.

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As shown in Table 4.10-9, which lists vibration levels for construction equipment, pile driving has the potential to generate the highest ground vibration levels and is of primary concern in regard to structural damage, particularly when it occurs within 100 feet of structures. Vibration levels generated by pile driving activities would vary depending on site-specific conditions, such as soil characteristics, construction methods, and equipment used. Other construction activities, such as caisson drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and the use of rolling stock equipment (tracked vehicles, compactors, etc.) may also potentially generate substantial vibration in the immediate vicinity.

TABLE 4.10-9 GROUNDBORNE VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Approximate Velocity Level at 25 Feet (VdB)	Approximate PPV Velocity at 25 Feet (inch/sec)
Pile Driver (impact) Upper Range	112	1.518
Pile Driver (impact) Lower Range	104	0.644
Pile Driver (sonic) Upper Range	105	0.734
Pile Driver (sonic) Lower Range	93	0.170
Vibratory Rollers	94	0.210
Large Bulldozer	87	0.089
Caisson Drilling	87	0.089
Jackhammer	79	0.035
Small Bulldozer	58	0.003
Loaded Trucks	86	0.076

Source: Federal Transit Administration, Transit Noise, and Vibration Impact Assessment, 2006.

Based on available information, vibration impacts would be as follows: Grading and demolition activities typically generate the highest vibration levels during construction activities. Except for pile driving, maximum vibration levels measured at a distance of 25 feet from an individual piece of typical construction equipment rarely exceed the levels where they become strongly perceptible (0.1 PPV in inches per second) or the thresholds for architectural damage at typical building structures (i.e., 0.2 to 0.5 PPV in inches per second). Additionally, it is important to note that groundborne vibration is almost never annoying to people who are outdoors, so it is usually evaluated in terms of indoor receivers.

In general, construction would be localized, would occur intermittently and variably, and would only occur for relatively short periods of time. Vibration-intense activities such as pile driving, rock blasting, and the use of vibratory rollers occurring in proximity of existing sensitive receptors such as residences and hotels would have the potential to cause annoyance to persons in these buildings, or to cause architectural damage in nearby buildings. The Project will be constructed in three phases as described in Section 3.4.2 of the Draft EIR. As shown above in table 4.10-9, typical construction equipment such as bulldozers, jackhammers, loaded trucks do not generate vibration levels above the applicable thresholds for vibration

annoyance (0.1 in/sec) and damage (0.2 in/sec). However, pile driving, rock blasting, and vibratory rollers would have the potential to generate vibration levels above the thresholds of annoyance and damage to existing and future buildings.

The City of San Leandro's Municipal Code prohibits construction activities adjacent to or across a street or right of way from a residential use, except between the hours of 7:00 a.m. and 7:00 p.m. on weekdays, or between 8:00 a.m. and 7:00 p.m. on Sunday and Saturday. Nevertheless, this restriction alone would be insufficient to prevent potentially significant vibration impacts if pile driving, rock blasting, or the use of vibratory rollers occur. Therefore, the Project could result in a *significant* impact with respect to both annoyance and architectural damage.

IMPACT NOISE-2: Implementation of the Project could result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Mitigation Measure NOISE-2: For construction, grading, and demolition activities that would use vibration-intense equipment such as pile driving, rock blasting and vibratory rollers that would occur within 250 feet of existing residential, commercial, libraries, and hotel buildings, the following mitigation measures shall be implemented in close coordination with City of San Leandro staff so that alternative construction techniques or scheduling approaches are undertaken.

For projects where vibration-intense equipment would be utilized within 250 feet of existing residential, commercial, libraries, and hotel buildings the following controls to reduce potential vibration impacts shall be implemented during construction, as practical:

- Prior to the issuance of building permits, City staff shall coordinate with the applicant and/or construction contractor to discuss alternative methods of construction for vibration-intense activities in close proximity to sensitive uses or existing structures. As part of this coordination, the applicant and/or construction contractor shall identify construction methods not involving vibration-intense equipment or activities. For example, drilled foundation caisson holes that would produce less vibration than pile driving methods, or the use of non-explosive rock breaking methods.
- The project applicant or constructor contractor shall implement reduced-vibration alternative methods identified during project review during subsequent excavation, grading, and construction for work conducted in close proximity to sensitive structures or uses.
- If possible, vibration-intense construction activities should take place during times when nearby sensitive receptors, such as libraries and hotel rooms are at their lowest utilization/occupancy.
- Prior to the issuance of building permits the applicant and/or construction contractor shall inspect and report on the current structural condition of the existing buildings within 200 feet from where pile driving, rock blasting, or within 30 feet from where vibratory rollers would be used.
- During construction, if any vibration levels cause cosmetic or structural damage to existing buildings in close proximity to a project site, the applicant shall immediately issue "stop-work" orders to the construction contractor to prevent further damage. Work shall not restart until the building is stabilized and/or preventive measures are implemented to relieve further damage to the building(s).

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With implementation of the mitigation measures listed above, the project would reduce potential vibration impacts. It is not known at this point if implementation of these measures would be feasible and if they would provide enough reduction to mitigate levels below thresholds. Even with implementation of the mitigation measures above, the project could result in substantial vibration levels to uses in the vicinity of the project site. This impact would be *significant and unavoidable*.

Significance After Mitigation: Significant and unavoidable.

NOISE-3	Implementation of the Project would result in a substantial permanent increase in ambient noise levels in the vicinity of the project site above levels existing without the Project.
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The San Leandro Environmental Hazards Element establishes thresholds for substantial noise increases in Policy 35.04, *Degradation of Ambient Noise Levels*. Specifically, the policy identifies 3 dB L_{dn} increase in ambient noise due to a project as a significant noise increase, and if the noise levels would degrade to the maximum tolerable levels shown in Table 6-1 (Table 4.10-7 of this Draft EIR).

Transportation-Related Noise

Development of land uses under implementation of the Project would result in increased levels of traffic in the project vicinity. The City's General Plan has the following policies that are related to noise increases from traffic along roadways:

- *Policy 35.04 Degradation of Ambient Noise Levels: If a neighborhood is well within acceptable noise standards, do not automatically allow noise levels to degrade to the maximum tolerable levels shown in Table 6-1 (Table 4.10-7 of this Draft EIR). A project's noise impacts should be evaluated based on the potential for adverse community response, as well as its conformance to the adopted standards. For CEQA purposes, an increase of 3 dB L_{dn} should generally be considered a significant adverse impact*
- *Policy 35.03 Residential Exterior Noise Standard: Strive to maintain an exterior noise level of no more than 60 dB L_{dn} in residential areas. Recognizing that some San Leandro neighborhoods already exceed this noise level, encourage a variety of noise abatement measures that benefit these areas.*

As discussed above, project-related increases greater than 3.0 dBA that would result in an exterior ambient noise level greater than 60 dBA L_{dn} at a residential use would constitute a significant adverse impact. To estimate traffic noise impacts, noise level contours were calculated using the FHWA Highway Traffic Noise Prediction Model (RD-77-108). The FHWA model determines a predicted noise level through a series of adjustments to a reference sound level. These adjustments account for traffic flows, speed, truck mix, varying distances from the roadway, length of exposed roadway, and noise shielding. Vehicle speeds on each roadway were assumed to be the posted speed limit, and no reduction in speed was assigned due to congested traffic flows. Current roadway characteristics, such as the number of lanes and posted speed limits, were determined from field observations and descriptions of roadways in the Project Transportation Impact Study, included as Appendix H of this Draft EIR. The distances to the 70, 65, and 60 CNEL contours for selected roadway segments with adjacent noise-sensitive uses in the vicinity of Project for Existing, Near Term and Long Term scenarios are included in Appendix G. The projected noise level increases for existing, near term, and long term scenarios at a distance of 50 feet from the roadway are presented in Tables 4.10-10 through 4.10-12.

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TABLE 4.10-10 AMBIENT NOISE LEVELS ALONG MAJOR ROADWAYS – EXISTING CONDITIONS WITH AND WITHOUT PROJECT

Roadway	Segment	Noise Levels for Existing Conditions		
		Without Project (dBA CNEL)	With Project (dBA CNEL)	Project Contribution
Doolittle Dr	south of Marina Blvd	68.4	68.5	0.1
Doolittle Dr	north of Marina Blvd	68.6	69.7	1.1
Davis St	west of Warden Av/Timothy Dr	69.1	69.6	0.5
Marina Blvd	west of Aurora Dr	60.4	64.7	4.3
Marina Blvd	west of Merced St	68.6	69.8	1.2
Fairway Dr	west of Aurora Dr	61.6	64.3	2.7
Fairway Dr	west of Merced St	65.6	66.4	0.8

Note: **Bold** shows roadway segments where a potentially significant impact may occur. Traffic noise model outputs are included in Appendix H of this Draft EIR.

TABLE 4.10-11 AMBIENT NOISE LEVELS ALONG MAJOR ROADWAYS – NEAR TERM CONDITIONS WITH AND WITHOUT PROJECT

Roadway	Segment	Noise Levels for Existing Conditions		
		Without Project (dBA CNEL)	With Project (dBA CNEL)	Project Contribution
Doolittle Dr	south of Marina Blvd	68.7	68.8	0.1
Doolittle Dr	north of Marina Blvd	69.1	69.8	0.7
Davis St	west of Warden Av/Timothy Dr	70.2	70.3	0.1
Marina Blvd	west of Aurora Dr	60.6	64.7	4.1
Marina Blvd	west of Merced St	69.0	69.9	0.9
Fairway Dr	west of Aurora Dr	62.1	64.6	2.5
Fairway Dr	west of Merced St	67.3	67.7	0.4

Note: **Bold** shows roadway segments where a potentially significant impact may occur. Traffic noise model outputs are included in Appendix G.

The right-most column of this table shows the project’s contribution to the future ambient conditions is calculated to be greater than 3 dBA at the segment of Marina Boulevard west of Aurora Drive, and less than 3 dBA at all other segments. The uses along Marina Boulevard west of Aurora Drive are single-family and multi-family residential. The existing and resulting noise level at uses along this segment would be greater than 60 dBA L_{dn} , which is the exterior noise level that the City strives to achieve for residential exterior uses. According to the City’s General Plan Policies 35.03 and 35.04 listed above, the noise level increase exceeding 3 dBA at residential uses along this segment would be considered a significant impact. Therefore, on-road vehicle noise due to the project would result in substantial permanent increases in ambient noise levels along Marina Boulevard west of Aurora Drive under all three scenarios, this impact would be *significant*.

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TABLE 4.10-12 AMBIENT NOISE LEVELS ALONG MAJOR ROADWAYS – LONG TERM CONDITIONS WITH AND WITHOUT PROJECT

Roadway	Segment	Noise Levels for Existing Conditions		Project Contribution
		Without Project (dBA CNEL)	With Project (dBA CNEL)	
Doolittle Dr	south of Marina Blvd	69.4	69.4	0.0
Doolittle Dr	north of Marina Blvd	69.8	70.2	0.4
Davis St	west of Warden Av/Timothy Dr	70.8	70.9	0.1
Marina Blvd	west of Aurora Dr	60.6	64.7	4.1
Marina Blvd	west of Merced St	69.2	70.2	1.0
Fairway Dr	west of Aurora Dr	62.0	64.6	2.6
Fairway Dr	west of Merced St	68.2	68.6	0.4

Note: **Bold** shows roadway segments where a potentially significant impact may occur. Traffic noise model outputs are included in Appendix G.

IMPACT NOISE-3: Implementation of the Project would result in a substantial permanent increase in ambient noise levels in the vicinity of the project site above levels existing without the Project.

Mitigation Measure NOISE-3: The existing single-family and multi-family residential uses along Marina Boulevard west of Aurora Drive would experience a noise increase of 4.1 dBA for all three scenarios due to project-related traffic. The resulting noise level at uses along this segment would be greater than 60 dBA L_{dn} , which is the exterior noise level that the City strives to achieve for residential exterior uses. According to the City’s General Plan Policies 35.03 and 35.04 listed above, the noise level increase greater than 3 dBA and resulting in an ambient noise level greater than 60 dBA L_{dn} at noise-sensitive residential uses along this segment would be considered a significant impact. Potential mitigation measures to be considered would be the construction of noise barriers along this road, or resurfacing this segment with rubberized asphalt. However, the construction of noise barriers are not feasible as the residential areas front and access Marina Boulevard; in addition, rubberized asphalt is only effective at roads in which cars travel at high speeds, as it only reduces tire-asphalt noise, but the speed limit in that segment is low, making this solution not effective. Therefore, no feasible mitigation measures are available to reduce these impacts. Therefore, on-road vehicle noise due to the project would result in substantial permanent increases in ambient noise levels along Marina Boulevard west of Aurora Drive, and this impact would be *significant and unavoidable*.

Significance After Mitigation: Significant and unavoidable.

NOISE-4 Construction activities associated with buildout of the Project would result in substantial temporary or periodic increases in ambient noise levels in the vicinity of the Project site above existing levels.

Implementation of the Project would have a significant impact if it would result in a substantial temporary or periodic increase in ambient noise levels in the Project site or vicinity above levels existing without implementation of the Project. Such temporary or periodic increases are typically associated with

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construction activity, and construction activity could occur at various times throughout implementation of the Project.

Temporary or periodic increases in ambient noise levels under implementation of the Project would chiefly result from construction activities associated with demolition, excavation, and construction associated with buildout of the Project. Table 4.10-13 below shows typical noise levels generated by commonly used pieces of construction equipment. Typical equipment used for demolition and site preparation of individual projects could include excavators, skid steer loaders, graders, dozers, scrapers, and trucks.

TABLE 4.10-13 CONSTRUCTION EQUIPMENT NOISE EMISSION LEVELS

Construction Equipment	Typical Noise Level (dBA) at 50 Feet	Construction Equipment	Typical Noise Level (dBA) at 50 Feet
Air Compressor	81	Pile-Driver (Impact)	101
Backhoe	80	Pile-Driver (Sonic)	96
Ballast Equalizer	82	Pneumatic Tool	85
Ballast Tamper	83	Pump	76
Compactor	82	Rail Saw	90
Concrete Mixer	85	Rock Drill	98
Concrete Pump	71	Roller	74
Concrete Vibrator	76	Saw	76
Crane, Derrick	88	Scarifier	83
Crane, Mobile	83	Scraper	89
Dozer	85	Shovel	82
Generator	81	Spike Driver	77
Grader	85	Tie Cutter	84
Impact Wrench	85	Tie Handler	80
Jack Hammer	88	Tie Inserter	85
Loader	85	Truck	88
Paver	89		

Source: Federal Transit Administration, Transit Noise, and Vibration Impact Assessment, 2006.

Typical equipment to be used for construction phases of projects includes backhoes, cranes, aerial lifts, generators, pumps, dumpers, rollers, and pavers. In some limited instances, individual projects may use rock blasters or pile drivers. As shown, construction equipment generates high levels of noise with maximums ranging from 71 dBA to 101 dBA. Noise from sources such as construction equipment

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dissipates rapidly with distance at a rate of 6 dBA per doubling distance. The loudest activities generally occur at demolition and site preparation where heavy earthmoving equipment is employed. Demolition and site preparation occurring in proximity of existing sensitive receptors such as residential and hotels would have the potential to cause high levels of noise at nearby uses. The only portions of the site located immediately adjacent to existing residential areas are on the northern portion of the site where two to three-story townhomes are planned, and at the southeast corner of the site where the public library would be constructed. Both of these elements of the Project are approximately 140 feet away from their respective nearest residences.

Construction of individual developments associated with buildout of the Project would temporarily increase the ambient noise environment and would have the potential to affect noise-sensitive land uses in the vicinity of a construction site. Significant noise impacts may occur from operation of heavy earthmoving equipment and truck haul that would occur with buildout of the Project. Construction noise levels are dependent upon the specific locations, site plans, and construction details of individual construction activities, which have not yet been developed, as construction of the Project would be implemented depending on market demands. It is anticipated that construction would occur in 3 phases as described in Section 3.4.2 of the Draft EIR. In general, construction would be localized, would occur intermittently and variably, and would only occur for relatively short periods of time.

Construction noise impacts typically occur when construction activities take place during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), when construction activities occur immediately adjacent to noise sensitive land uses, or when construction durations last over extended periods of time. Although construction activities may briefly or occasionally serve to elevate ambient noise levels at adjoining sensitive receptors, these impacts would generally be limited to the temporary demolition and site preparation and grading periods. Construction at each project feature at each site would be localized and would occur intermittently for varying periods of time.

The Municipal Code contains provisions which would serve to reduce the impact from construction noise. As discussed previously, the City of San Leandro's Municipal Code prohibits construction activities adjacent to or across a street or right of way from a residential use, except between the hours of 7:00 a.m. and 7:00 p.m. on weekdays, or between 8:00 a.m. and 7:00 p.m. on Sunday and Saturday.

Limiting construction activities to daytime hours is often a simple method to reduce the potential for construction noise impacts. Construction of individual developments associated with implementation of the Project would temporarily increase the ambient noise environment in the vicinity of each individual site. Because construction activities associated with any individual development may occur near noise-sensitive receptors and depending on the project type noise disturbances may occur for prolonged periods of time, construction noise impacts associated with implementation of the Project would result in a *significant* impact.

Impact NOISE-4: Construction activities associated with buildout of the Project would result in substantial temporary or periodic increases in ambient noise levels in the vicinity of the Project site above existing levels.

Mitigation Measure NOISE-4: The Project shall implement the following measures.

- Construction equipment shall be well maintained and used judiciously to be as quiet as practical. 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;
- Utilize “quiet” models of air compressors and other stationary noise sources where such technology exists. Select hydraulically- or electrically-powered equipment and avoid pneumatically powered equipment where feasible. Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project demolition or construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures;
- Locate stationary noise-generating equipment as far as possible from sensitive receptors that adjoin construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible;
- Prohibit unnecessary idling of internal combustion engines;
- Prior to initiation of on-site construction-related demolition or earthwork activities, a minimum 6-foot-high temporary sound barrier shall be erected along the project property line abutting adjacent operational businesses, residences or other noise-sensitive land uses. These temporary sound barriers shall be constructed with a minimum surface weight of four pounds per square foot and shall be constructed so that vertical or horizontal gaps are eliminated. These temporary barriers shall remain in place through the construction phase in which heavy construction equipment, such as excavators, dozers, scrapers, loaders, rollers, pavers, and dump trucks, are operating within 150 feet of the edge of the construction site by adjacent sensitive land uses. This measure could lower construction noise levels at adjacent ground floor residential units by up to 8 dBA, depending on topography and site conditions;
- Erect temporary noise control blanket barriers, if necessary, along building façades facing construction sites to prevent sleep disturbance. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling;
- To the maximum extent feasible, route construction-related traffic along major roadways and away from sensitive receptors;
- Notify all businesses, residences or other noise-sensitive land uses within 500 feet of the perimeter of the construction site of the construction schedule in writing prior to the beginning of construction and prior to each construction phase change that could potentially result in a temporary increase in ambient noise levels in the project vicinity;
- Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the on-site complaint and enforcement manager, and the City’s Chief Building Official, in the event of problems;

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- An on-site complaint and enforcement manager shall be available to respond to and track complaints. The manager will be responsible for responding to any complaints regarding construction noise and for coordinating with the adjacent land uses. The manager will determine the cause of any complaints (e.g., starting too early, bad muffler, etc.) and coordinate with the construction team to implement effective measures (considered technically and economically feasible) warranted to correct the problem. The telephone number of the coordinator shall be posted at the construction site and provided to neighbors in a notification letter. The manager shall notify the City's Chief Building Official of all complaints within 24 hours. The manager will be trained to use a sound level meter and should be available during all construction hours to respond to complaints; and
- A preconstruction meeting shall be held with the Chief Building Official and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are fully operational.

The above mitigation measures shall be identified in construction contracts and acknowledged by the contractor.

Significance After Mitigation: Less than significant.

NOISE-5 The Project would not result in exposure of people residing or working in the vicinity of the Project site to excessive aircraft noise levels, for a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport.

The Airport Land Use Plan (ALUC) for the Oakland International Airport includes policies to evaluate proposed land uses within the airport's influence area. The airport's land use compatibility plan establishes criteria to indicate maximum acceptable noise levels based on a long-range timeframe for a range of land uses. The airport's noise compatibility criteria establishes three levels of compatibility (Compatible, Conditional, and Incompatible) for various land use types. Land uses that are classified as "compatible" could be developed with standard construction methods to sufficiently attenuate exterior noise to an acceptable indoor community noise level, and outdoor activities would be carried out with essentially no interference from aircraft noise. Land uses classified as "conditional" would need to be designed so the 45 dBA CNEL indoor noise level can be achieved. Standard construction methods normally suffice. The noise levels may be acceptable for outdoor areas, although interference may occur. Land uses classified as "incompatible" may require extensive mitigation techniques to make the indoor environment acceptable and severe noise levels may cause outdoor activities to be unacceptable.

Although the project site is within Oakland International Airport's influence area and is exposed to noise from aircraft using this facility, no portions of the project site are located within the airport's 65 dBA CNEL noise contours. According to the conceptual master plan for the Project shown in Figure 3-3, the only area within the 60 dBA CNEL noise contour is a proposed restaurant and parking lot areas. These uses are not noise sensitive uses and would be "normally compatible" (see Table 4.10-7) with noise levels from transportation noise per Policy 35.01 of the General Plan. In addition, these uses would be compatible under the ALUC for the Oakland Airport, which means the land uses could be developed with standard

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construction methods to provide an acceptable exterior and interior noise levels due to aircraft noise at the affected land uses. Therefore, implementation of the Project would not result in exposure to excessive aircraft noise levels and the impact would be *less than significant*.

Applicable Regulations:

- None

Significance Before Mitigation: Less than significant.

NOISE-6 The Project would not result in exposure of people residing or working in the Project site to excessive noise levels, for a project within the vicinity of a private airstrip.

There are no private airstrips located in proximity of the Project site. Therefore, there would be *no impact* from excessive noise levels related to private airstrips.

Applicable Regulations:

- None

Significance Before Mitigation: No Impact.

4.10.4 CUMULATIVE IMPACT DISCUSSION

NOISE-7 This Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant impacts with respect to noise.

Most of the potential for noise impacts is site and area specific, not cumulative, except for traffic noise. As such, because there are no vacant, developable lots in the immediate vicinity of the Project site nor are there any reasonably foreseeable projects proposed, overall cumulative impacts regarding noise would be considered *less than significant*.

As discussed above, traffic related noise is the only potential source of cumulative noise impacts. The analysis to evaluate potential traffic noise impacts in NOISE-3 above addresses both project-level and cumulative impacts because it is based on traffic modeling that accounts for traffic related to the Project and cumulative projects. Construction and vibration impacts are localized and would result if construction would occur simultaneously at two nearby sites. There are no nearby off-site construction projects planned that would occur concurrent with the project in close proximity that, combined with project construction, would result in substantial impacts greater than discussed in Section 4.10.3. The Project would therefore not contribute to cumulatively considerable noise and vibration, and the impact would be *less than significant*.

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Applicable Regulations:

- None

Significance Without Mitigation: Less than significant.

POPULATION AND HOUSING

4.11 POPULATION AND HOUSING

This chapter describes the population, housing, and employment characteristics of San Leandro, including the Project site, and evaluates the potential impacts related to population, housing, and employment that could result from buildout of the Project.

4.11.1 ENVIRONMENTAL SETTING

4.11.1.1 REGULATORY FRAMEWORK

The regulatory framework related to population, housing, and employment is described below, including the Association of Bay Area Governments (ABAG) Bay Area Plan Projections 2013 and the City of San Leandro General Plan. The City of San Leandro General Plan was adopted in 2002 and contains a vision for San Leandro through the year 2015 including policies and actions to help achieve that vision.

Regional Regulations

Association of Bay Area Governments Projections 2013

ABAG is the official regional planning agency for the San Francisco Bay Area, which is composed 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 in 4-year cycles so that other regional agencies, including the Metropolitan Transportation Commission (MTC) and the Bay Area Air Quality Management District (BAAQMD), can use the forecast to make funding and regulatory decisions.

ABAG projections are the basis for the Regional Transportation Plan (RTP) and the regional Ozone Attainment Plan. In this way, ABAG projections have practical consequences that shape growth and environmental quality. General plans, zoning regulations, and growth management programs of local jurisdictions inform the ABAG projections. ABAG calculates the Regional Housing Needs Allocation (RHNA) for individual jurisdictions within Alameda County, including the City of San Leandro.

Local Regulations

City of San Leandro General Plan

The most recent San Leandro General Plan has a planning Horizon year of 2015. The Land Use section of the City of San Leandro General Plan contains goals and policies relevant to population, housing, and employment, as summarized in Table 4.11-1. The City is currently updating its Housing Element and must adopt it by January 31, 2015 under State law, which would include Action 53.01-D, Shoreline Area Housing Opportunities, which sets policy direction for the City to complete a planning study for the San Leandro Marina area which includes opportunities for new housing at a variety of densities. The San Leandro General Plan Update planning process, which will include preparation of a General Plan EIR, began in March 2014 and is expected to be completed by spring 2016.

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TABLE 4.11-1 SAN LEANDRO GENERAL PLAN GOALS, POLICIES, AND ACTIONS RELEVANT TO POPULATION AND HOUSING

Goal/Policy Number	Goal/Policy Text
Policy 1.01	Housing Maintenance: Support the on-going conservation, maintenance and upgrading of the City's housing inventory.
Policy 1.08	Multi-Family Housing Upkeep: Maintain and enforce high standards of maintenance and property upkeep after multi-family housing projects are completed and occupied.
Policy 2.06	Density Transitions: Avoid abrupt transitions from high density to low density housing. Where high-density development occurs, encourage such projects to step down in height and mass as they approach nearby lower density areas.
Policy 2.14	Constrained Sites: Focus new housing development on underutilized or infill sites on the city's flatter lands, rather than on previously undeveloped sites in the hills. Development on sites with significant geologic, hydrologic, or land stability constraints should be strongly discouraged.
Goal 3	New Housing Opportunities: Provide housing opportunities and improve economic access to housing for all segments of the community.
Policy 3.01	Mix of Unit Types: Encourage a mix of residential development types in the City, including single family homes on a variety of lot sizes, as well as townhomes, row houses, live-work units, planned unit developments, and multi-family housing.
Policy 3.09	Executive Housing: Encourage the provision of a significant amount of executive housing as part of an effort to maintain and diversify the City's economic base.
Policy 3.10	<p>Conversion of Non-Residential Land to Housing and Public Uses: Encourage the development of new housing on underutilized commercial and industrial sites which meet the following criteria:</p> <ul style="list-style-type: none"> ▪ Sites on the edges of commercial or industrial areas, adjacent to established residential areas. ▪ Sites where continued use with commercial or industrial activities could perpetuate existing land use conflicts. ▪ Sites with adequate infrastructure, access, and road capacity. ▪ Sites which are not constrained by external environmental factors, including freeway, railroad, and airport noise. ▪ Sites where conflicts with surrounding uses would not be created in the event of re-use. ▪ Sites which lack "prime" qualities for commercial or industrial development, such as direct freeway or rail access. ▪ Publicly-owned land which is not being used to its fullest potential. Sites meeting the above criteria should also be considered for churches, libraries, parks, community facilities, and other uses that provide necessary services and advance the quality of life in the community.
Policy 5.04	Cooperation with Developers: Work closely with developers and business interests to provide a constructive, cooperative attitude toward meeting the City's housing needs. Require developers to initiate early and frequent communication with affected neighborhood residents, local school boards, and homeowners associations.

Source: *San Leandro General Plan*.

City of San Leandro Housing Element

The San Leandro Housing Element was adopted in 2010 and is intended to plan for the period from 2010-2014. The Housing Element includes a housing needs assessment; an analysis of potential housing sites; potential constraints to housing production; housing goals, objectives, and policies; as well as an implementation program meant to accommodate housing development that will be affordable to a range of household types and income levels.

POPULATION AND HOUSING

4.11.1.2 EXISTING CONDITIONS

This section describes the existing population and housing conditions in the City of San Leandro to provide context for the analysis of the Project in this EIR.

Population

As shown in Table 4.11-2, ABAG 2013 population, housing, and employment projections, San Leandro’s population is projected to grow from 84,950 in 2010 to 103,300 in 2035, an increase of approximately 22 percent.¹ Since ABAG 2013 projections are used in regional planning efforts, the ABAG numbers are used for the purpose of evaluating environmental impacts in this EIR. The current estimated population within the Project site is between 16 to 20 people living as full time residents in boats docked in the harbor.²

TABLE 4.11-2 ABAG POPULATION, HOUSEHOLD, AND EMPLOYMENT PROJECTIONS FOR THE CITY OF SAN LEANDRO AND ALAMEDA COUNTY

City of San Leandro	2010	2020	2035	Change from 2010 -2035	
				Number	Percent
Population	84,950	91,700	103,300	18,350	21.6%
Households	30,717	33,270	37,080	6,363	20.7%
Jobs	39,980	47,150	51,120	11,140	27.8%
Alameda County					
Population	1,510,271	1,654,200	1,897,200	386,929	25.6%
Households	545,138	598,430	678,080	132,942	24.3%
Jobs	694,460	826,790	910,650	216,190	31.1%

Source: Association of Bay Area Governments, December 2013, *Projections 2013*, Jurisdictional Boundary Table, Alameda County.

Housing

US Census data indicates that there were 32,419 housing units in San Leandro in 2010.³ This represents an approximately 3.5 percent increase from the 2000 census data where there were a total of 31,334 housing units.⁴ Of the total number of existing housing units in 2010, 94.7 percent were occupied and the remainder vacant.⁵

¹ Association of Bay Area Governments, December 2013, *Projections 2013*, Jurisdictional Boundary Table, Alameda County.

² Email between Steve Noack (PlaceWorks) and Delmarie Snodgrass, City of San Leandro, September 4, 2014.

³ U.S. Census Bureau, Profile of General Population and Housing Characteristics: 2010, 2010 Demographic profile Data, Table DP-1, San Leandro city, California.

⁴ U.S. Census Bureau, Profile of General Population and Housing Characteristics: 2000, Census 2000 Summary File 1 (SF1) 100-Percent Data, Table DP-1, San Leandro city, California.

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As of 2010, among occupied housing units, owner-occupied housing exceeded renter-occupied housing, with owner-occupied having a larger share of units at 57.5 percent and renter-occupied housing at 42.5 percent. There is currently no housing on the Project site; however, as stated above, approximately 16 to 20 people live aboard boats docked in the harbor.

Employment

Industry and commerce provide thousands of jobs, millions of dollars in annual sales and property tax revenues, and many critical services to San Leandro residents. Employment districts in San Leandro include Downtown, industrial and office areas, shopping centers, commercial corridors, and the Marina.⁶ The San Leandro General Plan contains specific recommendations for each of these areas.

The policies in the Land Use Element of the San Leandro General Plan pertaining to the San Leandro Shoreline encourage the City to take advantage of the area's setting and location by accommodating additional hotels, restaurants, special events, and conference facilities.⁷ However, the plan cautions that additions should be made with care so that the Marina's essential function for recreation and open space is not compromised.

4.11.2 STANDARDS OF SIGNIFICANCE

The Project would have a significant impact with regard to population, housing, and employment if it would:

1. Induce substantial unexpected population growth, or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

4.11.3 IMPACT DISCUSSION

POP-1	The Project would not induce substantial unexpected population growth, or growth for which inadequate planning has occurred, either directly or indirectly.
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⁵ U.S. Census Bureau, Profile of General Population and Housing Characteristics: 2010, 2010 Demographic profile Data, Table DP-1, San Leandro city, California.

⁶ City of San Leandro, *General Plan 2002*, Land Use Element, page 3-44.

⁷ City of San Leandro, *General Plan 2002*, Land Use Element, pages 3-71 to 3-73.

POPULATION AND HOUSING

Direct Growth Inducement

For the purposes of this EIR, the Project would be considered to result in a substantial and unplanned level of growth if estimated buildout would exceed local and regional growth projections. The Project site General Plan land use designations are General Commercial and Parks and Recreation. Both are urban level designations that anticipate a broad range market in the first designation, and active recreation in the second. The Project site contains existing commercial and recreational uses but is underdeveloped at present. The Project would redevelop much of the site with a mixed use community of commercial, office, residential, recreational and civic uses. The Project entails a total of 354 housing unit, including 220 flats (61 condominiums and 159 market rate apartments), 92 townhomes, and 42 single-family detached homes. Using the average household size from the 2010 census of 2.74, which is relatively conservative given the large number of proposed flats, the proposed amount of housing is estimated to result in approximately 970 new residents. While the actual construction dates will be largely market driven, buildout of the Project is anticipated to occur as early as 2020. As shown in Table 4.11-2, the population in the city is projected to be at approximately 91,700 by the year 2020. This represents an increase of 6,750 residents, or a 7.9 percent increase from 2010 to 2020. Since the Project is projected to result in approximately 970 new residents (without factoring the number of residents displaced) in that same timeframe, an increase of approximately 1.1 percent from 2010, it would not be considered to result in substantial unplanned growth, since the projected growth would be well below the projected population increase reported by ABAG.

Indirect Growth Inducement

The Project entails a new 200-room hotel, 15,000 square feet of conference center, 3 new restaurants totaling 21,000 square feet, and a 150,000 square foot office campus. All of these new uses will attract employees to the space which is currently largely underutilized. The new employment opportunities would be similar to those that currently exist throughout San Leandro and therefore would not be anticipated to result in substantial changes to land use patterns or property value trends which could create the potential for unplanned growth. It is estimated that at buildout the 200 room hotel would result in 215 new employees. This assumes one job for every 500 square feet of building floor area. Assuming an employee generation rate of 1 employee for each 250 square feet, the 150,000 square feet of office space is projected to result in 600 new jobs. For the three restaurants and boat rental facility totaling 21,000 square feet, a rate of one employee for every 500 square feet of floor area was assumed. This would result in 108 new jobs. Maintenance needs for the park and recreation facilities could result in an additional 10 jobs. Assuming a rate of one job for every 250 square feet of floor area, the 15,000 square foot conference center would be anticipated to result in 60 new jobs. Projected employment for the library was not considered given that the proposed improvements to the existing library would serve as a replacement to an already existing library and, therefore, would not generate new employees considering existing staffing levels would remain the same. Therefore, the total number of new jobs generated by the Project would be 993. Applying the same generation rates to equivalent classes of uses, it is assumed that the uses that exist on site require approximately 76 employees under existing

POPULATION AND HOUSING

conditions.⁸ This means that the net increase in employees on the Project site would be approximately 917.

While some new employees may relocate to San Leandro, it is anticipated that the majority would be absorbed in the existing housing stock. Some of the new employees may move to the new residential units included as a part of the Project, and would be captured within the estimated growth of 970 residents described above. Additionally, many of these new employees will not relocate and instead will choose to commute to the Project site from outside of San Leandro. However, even in the unlikely scenario that all of the new employees choose to relocate to San Leandro as a result of the Project, the addition of 1,973 residents (970 residents plus 993 new employees) would not exceed the regional growth projections described above since the projected level of growth would still be less than 6,750.

In addition, the San Leandro General Plan anticipated the substantial growth in housing and employment proposed as a part of the Project. Goal 9 of the Land Use Element calls for the City to recognize and take advantage of the unique business amenities offered by the San Leandro Marina area. Also, the Project site is already served by public utilities and is an infill site in a developed area of the City. Therefore, considering that the amount of direct and indirect growth anticipated would not exceed ABAG projections and the growth was anticipated in the San Leandro General Plan, the Project would not induce substantial unexpected population growth, or growth for which inadequate planning has occurred, either directly or indirectly, and a *less-than-significant* impact would result in this respect.

Applicable Regulations:

- San Leandro General Plan
- City of San Leandro Housing Element

Significance Before Mitigation: Less than significant.

POP-2 The Project would not displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.

Upon removal of the boat docks in the Marina, the 16 to 20 remaining residents living in 10 boats in the harbor would be displaced. However, given the total of 32,419 housing units in San Leandro in 2010 and 94.7 percent occupancy, there would be existing housing options available.⁹ Moreover, the Project includes the construction of a total of 354 housing units on the Project site which would be available to the people currently residing in the boats docked in the harbor. Therefore, considering the relatively small number of units displaced, availability of other housing in San Leandro, and the net increase of housing

⁸ A lesser employee generation rate of one employee for every 500 square feet of floor area was assumed for the El Torito restaurant in order to allow for a more conservative analysis and represent the underutilized nature of the site under existing conditions.

⁹ U.S. Census Bureau, Profile of General Population and Housing Characteristics: 2010, 2010 Demographic profile Data, Table DP-1, San Leandro city, California.

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units resulting from buildout of the Project, a *less-than-significant* impact would result with respect to the displacement of a substantial number of housing units.

Applicable Regulations:

- San Leandro General Plan
- City of San Leandro Housing Element

Significance Before Mitigation: Less than significant.

POP-3 **The Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.**

As discussed in Impact POP-2 above, the 16 to 20 residents displaced as a result of removal of the boat docks in the Marina would have housing options available; thus, construction of replacement housing would not be required. Therefore, a *less-than-significant* impact would result with respect to the displacement of people.

Applicable Regulations:

- San Leandro General Plan
- City of San Leandro Housing Element

Significance Before Mitigation: Less than significant.

4.11.4 CUMULATIVE IMPACT DISCUSSION

POP-4 **This Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant impacts with respect to population and housing.**

This section analyzes potential impacts to population, housing, and employment that could occur from a combination of the Project with other reasonably foreseeable projects in the surrounding area. The geographic scope of this analysis is taken as the city of San Leandro. A cumulative impact would be considered significant if the Project, taken together with past, present, and reasonably foreseeable projects in the city of San Leandro, would result in substantial unplanned growth or the displacement of people or housing units. Table 4-1 of Chapter 4, Environmental Analysis, includes a list of other planned and reasonably foreseeable growth. While other growth is planned throughout the City, those projects would be subject to the same applicable regulations, processes, and policies related to population and housing as the Project. As such, cumulative impacts related to population and housing would be *less than significant*.

As discussed above, the Project would result in a net increase in housing units, residents and employees in the city. This growth combined with other projects in the area would result in impacts associated with traffic, noise, air quality, public services and utilities. These impacts are addressed in Chapters 4.13, 4.10, 4.2, 4.12, and 4.14 of this Draft EIR, respectively. As discussed above, under the most conservative estimate of potential population growth, the Project would be well under growth projections. Moreover,

POPULATION AND HOUSING

the number of housing units and individuals displaced by the Project would not be substantial and housing would not need to be constructed off site as a result. Since growth associated with the Project, together with the expected increase in population from the other planned and reasonably foreseeable projects, as listed in Table 4-1 of Chapter 4, Environmental Analysis, is expected to be well under ABAG growth projections for the City of San Leandro, substantial numbers of housing units and people would not be displaced; therefore, the Project's individual contribution to this cumulative impact would be *less than significant*.

Applicable Regulations:

- San Leandro General Plan
- City of San Leandro Housing Element

Significance Before Mitigation: Less than significant.

PUBLIC SERVICES AND RECREATION

4.12 PUBLIC SERVICES AND RECREATION

This chapter describes public services provided at the Project site and evaluates the potential impacts to public services that could result from development of the Project.

4.12.1 FIRE PROTECTION SERVICES

Environmental Setting

Regulatory Framework

State Regulations

The following sections explain State of California fire protection regulations relevant to the Project.

California Code of Regulations

Public Safety (Division 1 of Title 19)

Division 1 of Title 19, Public Safety, of the California Code of Regulations 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 Building Code (Title 24, Part 2)

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 California Building Code is based on the 2012 International Building Code, but has been modified for California conditions. It 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 local, City, and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of 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.

California Fire Code (Title 24, Part 9)

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 Title 24 of the California Code of Regulations, which is described in Section B.2.a.ii of the code. The CFC is revised and published every three years by the California Building Standards Commission.

PUBLIC SERVICES AND RECREATION

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 Uniform Building Code, which provides standards for fire-resistant building and roofing materials and other fire-related construction methods, as discussed above.

California Fire Plan

The California Fire Plan is the State's "road map" for reducing the risk of wildfire. The overall goal of the plan is to reduce total costs and losses from wildland fire in California through focused pre-fire management prescriptions and increased initial attack success. The current plan was finalized in early 2010. The Plan provides guidance to local jurisdictions, in meeting State goals.¹

Local Regulations

The following sections explain City of San Leandro and Alameda County Fire Department (ACFD) fire protection regulations relevant to the Project.

San Leandro General Plan

The City of San Leandro General Plan was adopted in 2002 and contains a vision for San Leandro through the year 2015 including policies and actions to help achieve that vision. Table 4.12-1 provides a list of policies in the San Leandro General Plan relevant to fire protection services.

San Leandro Municipal Code

Chapter 3-3 Uniform Fire Code

This Section of the Municipal Code incorporates the California Building Code, 2013 editions and the International Fire Code, 2012 edition by reference and adopts these documents as the Fire Code of the City of San Leandro.

Section 1-2-129 Functions of Fire Department

This section of the Municipal Code states that for the term of the agreement between the City of San Leandro and the ACFD, the Alameda County Fire Chief will take on the obligations and liability of the San Leandro Fire Chief. These obligations could be incurred by the general law of the State, through the Charter of the City of San Leandro, through the San Leandro Municipal Code, or any un-codified ordinance or administrative rule. Essentially, this section of the Municipal Code makes it clear that the ACFD is responsible for fire protection services in San Leandro.

¹ California Department of Forestry and Fire protection, 2014, http://cdfdata.fire.ca.gov/fire_er/fpp_planning_cafireplan, accessed September 3, 2014.

PUBLIC SERVICES AND RECREATION

TABLE 4.12-1 POLICIES OF THE SAN LEANDRO GENERAL PLAN RELATING TO FIRE PROTECTION SERVICES

Policy Number	Policy Text
Chapter 8 Community Services and Facilities	
Policy 45.01	Levels of Service. Maintain high-quality police and fire protection services through the most efficient and effective possible means. The following minimum level of service standards for police and fire response time (exclusive of dispatch time) shall be maintained: <ul style="list-style-type: none"> ■ Police Services: 5-minute response time for 90 percent of all Priority One calls. ■ Fire Services: 5-minute response time for 90 percent of all medical calls; 10-minute response time for 90 percent of all fire calls.
Policy 45.03	Positive Public Image. Promote a positive image of the local Police and Fire Departments through public information and outreach, effective media relations, and active participation of the Police and Fire departments in community events.
Policy 45.05	Review of Development Plans. Require Police and Fire Department review of proposed development plans to ensure that sufficient provisions for emergency access and response are made, fire code requirements are satisfied, and adequate levels of service can be provided.
Policy 45.07	Mutual Aid. Maintain mutual aid agreements for police and fire service with other jurisdictions to ensure that the capacity exists to adequately respond to local emergencies.
Policy 45.08	Staffing Diversity. Strive to maintain Police and Fire Department staffing which ensures high quality service while reflecting the gender and ethnic diversity of the community.
Policy 45.09	Paramedic Services. Continue to maintain a high level of paramedic services within the local Fire Department.

Source: San Leandro General Plan.

Alameda County Fire Department Fire and Emergency Services Strategic Business Plan

The ACFD’s Fire and Emergency Services Strategic Business Plan includes strategic initiatives, goals, and objectives aimed at maximizing the performance of the department and evaluating the long term direction of the ACFD. The plan includes strategic initiatives related to staffing, training, and performance management among others.

Existing Conditions²

The ACFD, through a contract for services, provides fire protection service to the City of San Leandro. The ACFD provides fire suppression, hazardous materials mitigation, paramedic response, urban search and rescue (including in the waters of the San Francisco Bay), fire prevention and public education services.

The ACFD maintains mutual aid agreements with the Oakland Fire Department as well as other departments in the County, in the case of a major emergency. The Department maintains active public education, CPR training, paramedic services, and emergency training programs, providing day-to-day contact with the public. The Department also works closely with City staff to review building permits and development applications, to ensure that adequate provisions are made for fire protection and emergency access before new projects are approved.

² Personal communications between Mark Kenegos (PlaceWorks) and Alameda County Fire Department Fire Marshall Bonnie S. Terra, June, 26, 2014.

PUBLIC SERVICES AND RECREATION

ACFD maintains 30 fire stations throughout Alameda County. There are five ACFD fire stations in San Leandro. These stations are listed below:

- ACFD Station 9. Located at 450 Estudillo Avenue, this station houses both an engine and a truck company, and services a predominantly residential area of approximately 3.25 square miles, which also contains portions of Highway 580.
- ACFD Station 10. Located at 2194 Williams Street, this station houses one engine company and services portions of Highways 880 and 238, along with a residential and commercial area of approximately 2.75 square miles. Located ½-mile from the Project site, this is the closest station to the Project site.
- ACFD Station 11. Located at 14903 Catalina Street, this station houses one engine company and services a rather large area of 4 square miles, which is mostly industrial and commercial with a small portion of residential. This station is the second closest station to the Project site, at just under a mile away.
- ACFD Station 12. Located at 1065 143rd Avenue, this station houses both an engine and a truck company. It is also the home of HazMat Response Vehicles, and the Battalion Chief for Battalion 1. Station 12 services an area of approximately 2.5 square miles, which consists of predominantly residential with some light commercial.
- ACFD Station 13. Located at 637 Fargo Avenue, this station houses one engine company and services an area of approximately 3.25 square miles, which is densely populated with predominantly single-family dwellings and also covers portions of Highways 880 and 238.

The ACFD's average emergency response time within San Leandro is five minutes or less for 90 percent of all medical calls and 10 minutes or less for 90 percent of all fire calls. The current service ratio for the entire ACFD service area is 1.04 sworn personnel per 1,000 residents (approximately 410 sworn personnel for 394,000 residents). In fiscal year 2013/2014, ACFD stations serving the City of San Leandro and surrounding areas responded to 36,621 calls, which equates to approximately 447 calls per 1,000 residents.³ The majority of calls received by the ACFD pertained to fires, eruptions/explosions, emergency medical services/rescue, hazardous conditions, and general services.⁴

4.12.1.2 THRESHOLDS OF SIGNIFICANCE

The Project would have a significant impact related to fire protection and emergency services if in order to maintain acceptable service ratios, response times, or other performance objectives for fire services, the Project would result in a need for new or physically altered facilities, the construction or operation of which could cause significant environmental impacts.

³ This is based on a population of 82,000, as described in Chapter 4.11, Population and Housing, of this Draft EIR.

⁴ Personal communications between Mark Kenegos (PlaceWorks) and Alameda County Fire Department Fire Marshall Bonnie S. Terra, June, 26, 2014.

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4.12.1.3 IMPACT DISCUSSION

SVCS-1	The Project would not result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.
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The Project would have a significant environmental impact if it would exceed the ability of fire and emergency medical responders to adequately serve the Project site, thereby requiring construction of new facilities or modification of existing facilities, the construction of which could cause significant environmental impacts.

Construction of the Project would result in a more intensive use of the site. Although the relationship is not directly proportional, more intense uses of land typically result in increased potential for fire and emergency incidents. This means that the Project would create an increased demand for fire protection services.

While there would be increased demand for fire protection services, there are several factors, which show that existing facilities are adequate to respond to this increase in demand. As mentioned above, ACFD Stations 10 and 11, which would be the primary stations responding to incidents on the Project site, have been replaced within the last 12 years. Additionally, as shown above, Policy 45.05 of the San Leandro General Plan calls for the fire department to review proposed development plans to ensure that there is adequate emergency access, Fire Code requirements are satisfied, and that adequate levels of service can be maintained with implementation of the Project. This process is implemented through the development review process. This required review would ensure that the final Project plans would not adversely affect the department's performance objectives. Finally, the ACFD has confirmed that the Project would not require the expansion of existing facilities in order to maintain acceptable service ratios, response times, or other performance objectives.⁵ Therefore, a *less-than-significant* impact would result in this respect.

Applicable Regulations:

- California Building Code
- San Leandro General Plan
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.

⁵ Personal communications between Mark Kenegos (PlaceWorks) and Alameda County Fire Department Fire Marshall Bonnie S. Terra, June, 26, 2014.

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4.12.1.4 CUMULATIVE IMPACT DISCUSSION

SVCS-2	The Project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to fire protection services.
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The area of cumulative effect for this analysis is the City of San Leandro. A significant cumulative impact would result if, in combination with past, present, and reasonably foreseeable projects, any increases in demand for fire protection services resulted in the construction and/or alteration of fire protection of facilities, of which the construction and/or alteration would result in potential environmental impacts.

As discussed above, the Project would increase demand for fire protection services in the city but this increase would not be of a magnitude that would require the ACFD to construct new facilities or expand existing facilities in order to maintain acceptable service ratios, response times, or other performance objectives. In combination with the Project, future development, as listed in Table 4-1 of Chapter 4, Environmental Analysis, would also contribute to increased demand for fire protection services, which could result in the need for altered and/or new fire protection facilities, the construction of which could result in potential environmental impacts. However, these other projects would be reviewed by the ACFD for their respective contributions to the cumulative increase in demand for fire protection services (in accordance with San Leandro General Plan Policy 45.05).

The ACFD passes on all of the direct costs for fire protection services in San Leandro in addition to a portion of the shared costs for management and administrative staff and services for the entire ACFD to the City of San Leandro, in accordance with the contract for services between the City of San Leandro and the ACFD. In fiscal year 2014-2015, 16.8 percent of ACFD's revenue came from charges for service from the City of San Leandro.⁶ Since the money needed to pay the ACFD for its services comes from the City's General Fund, General Fund forecasting done as a part of the City of San Leandro annual budgetary process would ensure that adequate amounts of funds are allocated to support fire protection services. In addition, a Development Agreement between the City and the developer of the Project would ensure that funding for the Project's contribution to adequate fire protection facilities and services is provided. Therefore, a *less-than-significant* impact would result.

Applicable Regulations:

- California Building Code
- San Leandro General Plan
- San Leandro Municipal Code
- Alameda County Fire Department Fire and Emergency Services Strategic Business Plan

Significance Before Mitigation: Less than significant.

⁶ Alameda County Fire Department, Alameda County Budget Work Session FY 2014-2015.

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4.12.1.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The Project would not result in any significant Project-specific or cumulative impacts to fire protection services and therefore no mitigation measures are required.

4.12.2 POLICE SERVICES

4.12.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

Local Regulations

The following section explains City of San Leandro regulations pertaining to police services, relevant to the Project.

San Leandro General Plan

Table 4.12-2 lists the San Leandro General Plan Policies relevant to police services.

Existing Conditions

Police services in the vicinity of the Project site are provided by the San Leandro Police Department (SLPD), with mutual aid provided on an as-needed basis from the Alameda County Sheriff's Department. First response services would be provided by the SLPD station headquarters at 901 East 14th Street, approximately 3 miles northeast of the Project site.⁷

The San Leandro Police Department is composed of 137 employees, including one chief, two captains, six lieutenants, 13 sergeants, and 68 officers. In 2001, the City had a ratio of 1.2 officers for every 1,000 residents in the City.⁸ Using the estimate for the 2010 population of San Leandro produced in ABAG's *Projections 2013*, of 84,950, the existing officer-to-resident ratio in the city is 1.06. This is lower than the national average of 1.8 but is similar to the average for cities in Alameda County. SLPD does not have a service ratio standard.

At this time, the department's average response time is 4.3 minutes for priority 1 calls, 4.8 minutes for priority 2 calls, and 7.6 minutes for priority 3 calls. San Leandro is divided into seven "beats" for patrol functions, and is patrolled by at least one officer on a 24-hour basis.⁹ The Project site is located within SLPD's Beat 4.¹⁰ The SLPD computer system does not track average response times.

⁷ Personal Communications between Police Captain Greg Lemmon (SLPD) and Mark Kenegos (PlaceWorks), June 30, 2014.

⁸ City of San Leandro, 2002, San Leandro General Plan, Community Services and Facilitates Element, page 8-2.

⁹ City of San Leandro, 2002, San Leandro General Plan, Community Services and Facilitates Element, page 8-2.

¹⁰ City of San Leandro, City of San Leandro website, <http://www.sanleandro.org/depts/pd/aslpd/beatmap/beat4.asp>. Accessed on June 18, 2014.

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TABLE 4.12-2 POLICIES OF THE SAN LEANDRO GENERAL PLAN RELATING TO POLICE SERVICES

Policy Number	Policy
Chapter 8 Community Services and Facilities	
Policy 45.02	Community Policing. Support a community-based approach to police and fire services. This approach should emphasize a high level of communication and interaction between officers, local residents, neighborhood groups, schools, and businesses.
Policy 45.03	Positive Public Image. Promote a positive image of the local Police and Fire Departments through public information and outreach, effective media relations, and active participation of the Police and Fire departments in community events.
Policy 45.04	Safe Environment for Youth. Support the proactive involvement of the Police Department in creating a safe and healthy environment for youth in San Leandro. Partnerships between the Police Department, School Districts, and private schools should be maintained through such programs as D.A.R.E., and the assignment of student resource officers to the High and Middle Schools. Active participation by students and their parents in these programs will be strongly encouraged.
Policy 45.05	Review of Development Plans. Require Police and Fire Department review of proposed development plans to ensure that sufficient provisions for emergency access and response are made, fire code requirements are satisfied, and adequate levels of service can be provided.
Policy 45.07	Mutual Aid. Maintain mutual aid agreements for police and fire service with other jurisdictions to ensure that the capacity exists to adequately respond to local emergencies.
Policy 45.08	Staffing Diversity. Strive to maintain Police and Fire Department staffing which ensures high quality service while reflecting the gender and ethnic diversity of the community.

Source: San Leandro General Plan.

4.12.2.2 THRESHOLDS OF SIGNIFICANCE

The Project would have a significant impact related to police protection and emergency services if in order to maintain acceptable service ratios, response times, or other performance objectives for police services, the Project would result in a need for new or physically altered facilities, the construction or operation of which could cause significant environmental impacts.

4.12.2.3 IMPACT DISCUSSION

SVCS-3 The Project would not result in the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

As described above, the existing officers to residents ratio is 1.06 officers for every 1,000 residents. As discussed in Section 4.11, Population and Housing, the Project would add 970 residents to the Project site. Without adding any additional officers, this increase in population would result in 1.05 officers for every 1,000 residents. As such, in order to maintain the existing ratio of officer per 1,000 residents, one additional officer would be needed. Additionally, a police service technician would be needed to

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accommodate an increase to calls for police service.¹¹ However, as stated above, the City has not established a service ratio standard at this time. Overall, the slight reduction in the existing ratio or the potential need for one additional officer and one police service technician would not likely result in the need for expansion of police protection facilities.

The addition of retail space and recreation opportunities included as a part of the Project would increase the visitor population within the Project site. This increase in the visitor population would increase the demand for police services. However, as required by Policy 45.05 of the San Leandro General Plan, the SLPD would be required to review the development plans for the Project to ensure that adequate levels of service can be provided. Although one additional officer and one police service technician would be needed to accommodate an increase in calls for police protection services, it is unlikely that two additional staff of the SLPD would result in the need for expanded and/or new police protection facilities. Therefore, a *less-than-significant* impact would result with respect to police protection services.

Applicable Regulations:

- San Leandro General Plan

Significance Without Mitigation: Less than significant.

4.12.2.4 CUMULATIVE IMPACT DISCUSSION

SVCS-4 The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to police services.

The area of cumulative effect for this analysis is the service area for the SLPD, which are the city limits of San Leandro. A significant cumulative impact would result if, in combination with past, present, and reasonably foreseeable projects, any increases in demand for police protection services resulted in the construction and/or alteration of fire protection of facilities, of which the construction and/or alteration would result in potential environmental impacts.

As described above, on its own, the Project would not result in the need for an expansion of SLPD facilities. However, the Project in conjunction with other planned and reasonably foreseeable projects, as listed in Table 4-1 of Chapter 4, Environmental Analysis, in the city would have the potential to exceed the SLPD's existing capacity, necessitating the expansion and or construction of police facilities. San Leandro's General Fund supports police services in the city. Seventy-five percent of the General Fund is supported by sales taxes, property taxes, utility user's taxes, and business license taxes.¹² For fiscal years 2014-2015, police services make up 34.6 percent of total General Fund expenditures.¹³ The Project, along with future development throughout the city, would contribute to the tax base for all of these types of taxes,

¹¹ Communication between PlaceWorks staff and the City (City confirmed input from Greg Lemmon of the San Leandro Police Department) on September 22, 2014.

¹² City of San Leandro, City Council's Adopted Biennial Budget, Fiscal Years 2014 and 2015, page 5.1.

¹³ City of San Leandro, City Council's Adopted Biennial Budget, Fiscal Years 2014 and 2015, page 5.20

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therefore, ensuring adequate police protection facilities are provided as development occurs. Funds for police services are allocated during the annual or biennial monitoring and budgeting process to ensure that the provision of police services is adequate to respond to changes in the city. General Fund forecasting done as a part of the City of San Leandro annual budgetary process would help to ensure that adequate amounts of funds are allocated to support police services.

Additionally, a Development Agreement between the City and the developer of the Project would ensure that funding for the Project's contribution to adequate police protection facilities and services is provided. Therefore, a *less-than-significant* cumulative impact would result with respect to police services.

Applicable Regulations:

- San Leandro General Plan

Significance Before Mitigation: Less than significant.

4.12.2.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The Project would not result in any significant Project-specific or cumulative impacts to police services and therefore no mitigation measures are required.

4.12.3 SCHOOLS

4.12.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

The following sections explain State of California regulations pertaining to schools, relevant to the Project.

California State Assembly Bill 2926 (AB 2926) – The School Facilities Act of 1986.

AB 2926 allows for local agencies to impose developer impact fees on new development in order to pay for school facilities. This act was expanded in 1987 with the passage of AB 1600. AB 1600 added Section 66000 et seq. of the Government Code also known as the Mitigation Fee Act. This act establishes the requirement of nexus between the fees being exacted and the needs being created by the project paying the fee as well as other requirements related to the collection of development impact fees which apply to fees collected for school facilities.

California Senate Bill 50 (SB 50)

SB 50 places limitations on the power of local governments to require mitigation of school facilities by developers. Under the provisions of SB 50, school districts can collect fees to offset the cost of expanding school capacity which becomes necessary as development occurs. These fees are determined based on the square footage of proposed uses. As a part of this Bill, school districts must base their long-term facilities needs and costs on long-term population growth in order to qualify for this source of funding. Payment of statutory school fees is deemed to be adequate mitigation of school impacts under CEQA.

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California State Assembly Bill 97 (AB 97)

Approved in July, 2013, AB 97 revises existing regulations related to financing for public schools, by requiring State funding for county superintendents and charter schools that previously received a general-purpose entitlement. The bill authorizes local educational agencies to spend, for any local educational purpose, the funds previously required to be spent for specified categorical education programs, including, among others, programs for teacher training and class size reduction.

Education Code Section 17620

This section of the California Education Code allows the governing board of school districts in the state to levy a fee, charge, dedication, or other requirement against construction projects within the boundaries of the school district, for the purpose of funding the construction or reconstruction of school facilities. The city or county responsible for issuing the permit for such a construction project is not permitted to issue a building permit for any construction without certification by the appropriate school district that any fee, charge, dedication, or other requirement levied by the school district is complied with.

At the time this legislation was passed, a maximum fee rate of \$1.50 per square foot for residential construction and \$0.25 per square foot for commercial/industrial construction was established. Government Code Section 65995 provides for an inflationary increase in the fees every two years based on the changes in the Class B construction index. As a result of these adjustments, the fees authorized by Education Code 17620 are, as of 2014, \$3.36 per square foot of residential construction and \$0.54 per square foot of commercial or industrial construction.

Local Regulations

The following sections explain City of San Leandro regulations pertaining to schools, relevant to the Project.

Measure B

Measure B was a \$109 million school facilities bond measure passed by the citizens of San Leandro in 2006. One of the main objectives of the measure was to address overcrowding at San Leandro High School. Construction projects associated with Measure B include a self-contained comprehensive campus dedicated to 9th graders, the San Leandro High School Arts Education Center and 550-seat theater, a 2,200-square-foot library expansion at San Leandro High School, the career technical education and industrial arts center, as well as a district parking lot at San Leandro High School.¹⁴

Measure M

Measure M was a \$50.1 million school facilities bond passed by San Leandro voters in 2010. These funds are to be distributed to all of the schools in the district, primarily for upgrades and expansion of athletic facilities. Some of the projects to be paid for by measure M funds include a synthetic track and field at

¹⁴ San Leandro Unified School District, San Leandro Unified School District website, <http://www.sanleandro.k12.ca.us//site/default.aspx?PageID=120>. Accessed on September 8, 2014.

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John Muir Middle School, a par course at Bancroft Middle School, a new Swim Center, Track and Field at San Leandro High School, the San Leandro Unified School District (SLUSD) Pacific Sports Complex at Burrell Field, and renovations at every elementary school.¹⁵

San Leandro General Plan

Table 4.12-3 lists the San Leandro General Plan Policies pertaining to schools, relevant to the Project.

TABLE 4.12-3 POLICIES OF THE SAN LEANDRO GENERAL PLAN RELATING TO SCHOOLS

Policy Number	Policy
Chapter 8 Community Services and Facilities	
Policy 46.01	Partnerships. Promote coordination and partnerships between the City, the School Districts, and the business community which emphasize the importance of education to the social and economic vitality of the City.
Policy 46.02	Mitigation of Development Impacts. When new residential development is approved, require mitigation of school impacts to the full extent permitted by law. Work collaboratively with the San Leandro and San Lorenzo Unified School Districts to ensure that appropriate fees are collected and other allowable mitigation measures are taken.
Policy 46.05	Private Schools. Encourage the involvement of private schools and other learning institutions in City discussions relating to education and school facilities.

Source: San Leandro General Plan.

Existing Conditions

The San Leandro Unified School District (SLUSD) and the San Lorenzo Unified School District (SLZUSD) operate the public schools within the City of San Leandro. The Project site is covered by the SLUSD which in the 2013-14 school year had a total enrollment of 8,658 students from kindergarten through grade 12. SLUSD consists of eight elementary schools, two middle schools, one comprehensive high school with two campuses, an alternative high school and four other facilities which include administrative offices, a community education center, and Burrell Field which contains athletic fields for sporting events.¹⁶

SLUSD has produced a Strategic Action Plan for the period between 2013 and 2016. Goal number five in this document calls for the district to continue to improve school district facilities and infrastructures to ensure facilities are user friendly, accessible and energy efficient. Within this goal it is noted that SLUSD will discuss and decide on a new Master Facility Plan. Additionally, it is noted under this goal that SLUSD will decide on a new bond for any other facility items not covered by pervious bonds, continue maintenance on SLUSD facilities and ensure that the General Fund budget has adequate resources to maintain all the facilities; existing and new.¹⁷

¹⁵ San Leandro Unified School District, San Leandro Unified School District website, <http://www.sanleandro.k12.ca.us/MeasureM>. Accessed on September 8, 2014.

¹⁶ San Leandro Unified School District, San Leandro Unified School District website, <http://www.sanleandro.k12.ca.us/Domain/45>, accessed September 12, 2014.

¹⁷ San Leandro Unified School District, Strategic Action Plan 2013-2016.

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The closest elementary school to the Project site is Garfield Elementary, located at 13050 Aurora Drive, approximately a quarter of a mile away from the Project site. During the 2013-14 school year, enrollment at Garfield Elementary was 412 students, and the capacity of the facility was 450 students. The closest middle school to the Project site is John Muir Middle School, located at 1444 Williams Street, approximately 1.3 miles from the Project site. During the 2013-14 school year, the enrollment at John Muir Middle School was 986, and the capacity of the facilities was 1,000. San Leandro High School is approximately 2.5 miles from the Project site. During the 2013-14 school year, the enrollment at San Leandro High School was 2,535, and the capacity of the facilities was 2,600.

Approximately 30 years ago, the SLUSD had two comprehensive high schools, San Leandro High School on the east side of the city and Pacific High School on the west side of San Leandro. Pacific High school was eventually closed and replaced with the Marina Square outlet mall near the intersection of Marina Boulevard and I-880. At this time, San Leandro High School is the only comprehensive high school in the district and is approximately 2.5 miles from the Project site. During the 2013-14 school year, enrollment at San Leandro High School was 2535, and the capacity of the facilities was 2600 students. Lincoln High and Lighthouse Independent Study Center, an alternative high school near the Project site, is located at 2600 Teagarden Avenue, approximately 1.3 miles from the Project site. During the 2013-14 school year, enrollment at the Lincoln High and Lighthouse Independent Study Center was 159, and the capacity of the facilities was 170 students. In total, during the 2013-2014 school year, Garfield Elementary, John Muir Middle School, San Leandro High School, and Lincoln Alternative High School had excess capacity of 128 students.¹⁸ For the district as a whole, in the 2013-14 school year, the total available capacity was 1,314 students.¹⁹

4.12.3.2 THRESHOLDS OF SIGNIFICANCE

The Project would have a significant impact related to school services if in order to maintain acceptable service ratios, or other performance objectives for school services, the Project would result in a need for new or physically altered facilities, the construction of which could cause significant environmental impacts.

4.12.3.3 IMPACT DISCUSSION

SVCS-5	The Project would not result in the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.
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As described above, during the 2013-14 school year, the schools closest to the Project site had a total excess capacity of 128 students and the SLUSD as a whole had an excess capacity of 1,314 students.

¹⁸ Personal communications between Mark Kenegos (PlaceWorks) and SLUSD Superintendent Mike McLaughlin, Ed.D, September 11, 2014.

¹⁹ San Leandro Unified School District, February 2014, Level I – Developer Fee Justification Study for San Leandro Unified School District, page 10.

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However, the district has estimated that, in part, as a result of the passage of AB 97, which ties sources of funding for schools to reduced class sizes for kindergarten through grade 3, the district will reach capacity of existing facilities in 2016 or 2017. Furthermore, based on estimated future growth on the west side of San Leandro, SLUSD projects 1 additional elementary school and 1 additional high school will be needed in 2016 or 2017.²⁰

As described above, California Education Code Section 17620 allows school districts to levy fees against new construction projects, which would generate students that would use district school facilities. The Developer Fee Justification Study for SLUSD has established level I developer impact fees at the rate of \$3.36 per square foot for residential construction and \$0.54 per square foot for commercial/industrial construction.²¹ Since the Project proposed to add 296,050 square feet of commercial space and 353,770 square feet of residential space, the total fee that would be collected by SLUSD from the Project applicant from Level I fees would be \$1,348,534.²² These fees would be used to accommodate the students generated by the Project. Where a school district determines that additional revenues are required to accommodate students, the district can assess Level II and Level III impact fees, issue a general obligation bond, or establish a community facilities district.

Regardless of if, when or where expanded facilities would be built, the collection of statutory development impact fees for the Project would address the potential impacts resulting from an increase in students to a *less-than-significant* level.

Applicable Regulations:

- AB 2926
- SB 50
- AB 97
- San Leandro General Plan
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.

4.12.3.4 CUMULATIVE IMPACT DISCUSSION

SVCS-6	The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to school services.
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²⁰ Personal communications between Mark Kenegos (PlaceWorks) and SLUSD Superintendent Mike McLaughlin, Ed.D, September 11, 2014.

²¹ San Leandro Unified School District, February 2014, Level I – Developer Fee Justification Study for San Leandro Unified School District.

²² Residential: 353,770 square feet X 3\$.36 = \$1,188,667. Commercial: 296,050 square feet X \$0.54 = \$159,867. \$1,188,667 + \$159,867 = \$1,348,534.

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The area of cumulative effect for this analysis is considered to be the SLUSD service area. As described above, the Project is subject to payment of statutory school impact fees. Other new development in the District would similarly be subject to payment of the statutory fees, which would fully mitigate the impact of other projects in the District. With payment of statutory impact fees, the Project's contribution to the demand for school facilities would not be cumulatively considerable and a *less-than-significant* impact would result.

Applicable Regulations:

- AB 2926
- SB 50
- AB 97
- San Leandro General Plan
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.

4.12.3.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The Project would not result in any significant Project-specific or cumulative impacts to school services and therefore no mitigation measures are required.

4.12.4 PARKS

4.12.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

The following sections explain State of California regulations pertaining to parks, relevant to the Project.

The Quimby Act

Since the passage of the 1975 Quimby Act (California Government Code Section 66477), cities and counties have been authorized to pass ordinances requiring that residential subdivision developers set aside land, or pay in-lieu fees for park or recreational purposes. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities.²³ The Mitigation Fee Act (AB 1600) is not limited to subdivisions and allows broader authority for adopting park impact fees. Cities and counties with a high ratio of park space to inhabitants can set a standard of up to 5 acres per 1,000 people for new development. Cities and counties with a lower ratio can only require the provision of up to 3 acres of park space per 1,000 people. The calculation of a city or county'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/county-

²³ Westrup, Laura, 2002, *Quimby Act 101: An Abbreviated Overview*, Sacramento: California Department of Parks and Recreation. (<http://www.parks.ca.gov/pages/795/files/quimby101.pdf>).

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owned parkland. The City has adopted parks and recreation impact fees that are applicable to residential development. Proposed projects are required to pay these fees, which are collected at building permit issuance if they do not meet the required park square footage.

Local Regulations

The following sections explain City of San Leandro regulations pertaining to parks, relevant to the Project.

San Leandro General Plan

Table 4.12-4 shows the policy in the San Leandro General Plan relevant to parkland dedication.

TABLE 4.12-4 POLICIES OF THE SAN LEANDRO GENERAL PLAN

Policy Number	Policy Text
Chapter 5 Open Space, Parks, and Conservation	
Policy 22.02	Park Dedication. Require new residential development to pay an impact fee and/or to dedicate parkland to offset the increase in park needs resulting from new residents. Where on-site parkland is dedicated, it should be improved, maintained, and accessible to the general public.

Source: San Leandro General Plan.

San Leandro Municipal Code

Chapter 7-13 Park Facilities Development Impact Fee

This section of the Municipal Code states that a park facilities impact fee has been established, establishes the use of fee revenues, contains provisions on developer construction activities, and includes administrative guidelines.

Existing Conditions

Parks and recreational facilities in the city of San Leandro are under the jurisdiction of the San Leandro Recreation and Human Services Department (SLRHS). SLRHS manages a total of 121 acres of parkland.²⁴ This figure includes four community parks, ten neighborhood parks, six mini-parks, and four special use recreation areas. The recreational facilities closest to the Project site include Marina Park, the San Leandro Dog Park, the Oyster Bay Regional Shoreline area (owned and managed by East Bay Regional Park District), and Bonaire Park. These facilities contain a variety of equipment and facilities including walking paths, picnic areas, children's play equipment, shade structures, dog facilities, and sports fields.

In addition to the facilities managed by SLRHS, there are a total of 87 acres of open space and recreation facilities at local schools and 178 acres of public golf course.²⁵ The Project site is partially within the

²⁴ City of San Leandro, City of San Leandro website, <https://sanleandro.org/depts/rec/parks/default.asp>. Accessed on September 9, 2014.

²⁵ City of San Leandro, San Leandro General Plan, Parks Element, page 5-3.

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existing boundaries of the 9-hole Marina Golf course and adjacent to the 18-hole Tony Lema Golf Course, both of which comprise the Monarch Bay Golf Club. Burrell Field and Pacific Sports Complex contains turf baseball and softball fields as well as a synthetic turf football stadium and track. Next door to this complex is the City's San Leandro Ball Park, a hard-ball stadium with concrete seating. Madison playground, which is collocated with James Madison elementary school and next to Bonaire Park, approximately 1.2 miles from the Project site contains a baseball field and basketball courts. Mulford Park, which is a small private park available only to residents of Mulford Gardens, less than a ¼-mile from the Project site and includes children's play equipment and picnic areas. Some of these recreation facilities, such as the Pacific Sports Complexes, are maintained by the City of San Leandro through an agreement between the San Leandro Unified School District and the City.

Including school facilities and the golf courses, the existing parkland to resident ratio is 4.54 acres of parkland for every 1,000 residents. This assumes a total of 386 acres of parkland and a total of 84,950 residents, as shown in ABAG's *Projections 2013* for the year 2010. The means that the City is currently below the parkland to residents ratio goal of 4.86 acres of improved parkland for every 1,000 residents.

4.12.4.2 THRESHOLDS OF SIGNIFICANCE

The Project would have a significant impact related to parks if in order to maintain acceptable service ratios, or other performance objectives, the Project would result in a need for new or physically altered facilities, the construction or operation of which could cause significant environmental impacts.

4.12.4.3 IMPACT DISCUSSION

SVCS-7 The Project would not result in the need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.

As discussed above, the existing parkland ratio in the City is 4.54 acres of parkland for every 1,000 residents. This is below the target ratio of 4.86 acres of improved parkland for every 1,000 residents. As described in Chapter 4.11, Population and Housing, the Project is projected to result in an increase of 970 residents in San Leandro. Considering all other development remains the same, construction of the proposed housing units would bring the parkland ratio to 4.49 acres of parkland for every 1,000 residents. However, the Project would eliminate approximately 7 acres of land from the Marina 9-hole golf course to construct the north and south golf course residential components of the Project. The 9-hole Marina golf course would be reconfigured to maintain the functionality of the golf course. Additionally, the Project would add recreation facilities in the form of pedestrian and bicycle paths, boardwalks, bocce ball courts, small boat recreation in the marina, and a pedestrian bridge, which would allow more recreation opportunities by increasing connectivity.

The addition and reduction of recreation facilities that would result from implementation of the Project would essentially result in a neutral net effect on parkland in San Leandro; therefore, the city's parkland ratio would continue with the Project, albeit below the established target. Policy 22.02, Park Dedication, requires that new residential development pay an impact fee and/or dedicate parkland to offset the

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increase in park needs resulting from new residents. This San Leandro General Plan policy is implemented through the provisions contained in Section 7-13 of the San Leandro Municipal Code, which states that a development impact fee is established to pay for public park and recreational facilities. This means that the developer of the Project would be required to pay a fee or provide parkland in accordance with City ordinance requirements. Therefore, the Project would not substantially reduce the existing parkland-to-residents ratio. A *less-than-significant* impact would result in this respect.

Applicable Regulations:

- San Leandro General Plan
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.

4.12.4.4 CUMULATIVE IMPACT DISCUSSION

SVCS-8	The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to parks.
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The area of cumulative effect for this analysis is the city limits of the City of San Leandro. The Project, in combination with other planned and reasonably foreseeable projects in the area would increase the demand for park services in San Leandro. However, like the Project, other projects which would increase population growth would be subject to the same provisions described above relating to the requirements for parkland dedication and/or payment of park impact fees. Therefore, a *less-than-significant* impact would result with respect to cumulative impacts to recreational facilities.

Applicable Regulations:

- San Leandro General Plan
- San Leandro Municipal Code

Significance Before Mitigation: Less than significant.

4.12.4.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The Project would not result in any significant Project-specific or cumulative impacts to parks and therefore no mitigation measures are required.

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4.12.5 OTHER PUBLIC FACILITIES

4.12.5.1 ENVIRONMENTAL SETTING

Regulatory Framework

Local Regulations

The following section explains City of San Leandro regulations pertaining to other public facilities, relevant to the Project.

San Leandro General Plan

Table 4.12-5 lists the San Leandro General Plan Policies pertaining to other public facilities, relevant to the Project.

TABLE 4.12-5 POLICIES OF THE SAN LEANDRO GENERAL PLAN RELATING TO OTHER PUBLIC FACILITIES

Policy Number	Policy
Chapter 8 Community Services and Facilities	
Policy 47.01	Library Expansion and Upgrades. Support the expansion and upgrading of public library facilities and services to keep pace with changes in information technology and community needs.
Policy 47.02	Adequate Funding. Ensure that library funding remains adequate to sustain existing service levels, and where possible, increased service levels. Maintain American Library Association standards throughout the City's library system.
Policy 47.03	Libraries as Neighborhood Centers. Promote programs and events that affirm the role of the City's libraries as community and neighborhood gathering places and that reflect the City's diverse population.
Policy 47.04	Resources for Self-Improvement. Ensure that San Leandro's libraries and other community institutions provide a setting for the open exchange of ideas and information and provide an opportunity for residents of all backgrounds to improve their skills and knowledge.
Policy 52.01	Development Impacts. Permit new development only when infrastructure and utilities can be provided to that development without diminishing the quality of service provided to the rest of the City.

Source: San Leandro General Plan.

Existing Conditions

The primary public facility, not listed above, with the potential to be impacted by the Project is the San Leandro Public Library. The City of San Leandro Library currently operates five different facilities in the city. These include the San Leandro Main Library in the downtown, the Manor Branch, the South Branch, Casa Peralta/San Leandro History Museum and Art Gallery, as well as the Mulford-Marina Branch which is located on the Project site.

4.12.5.2 THRESHOLDS OF SIGNIFICANCE

The Project would have a significant impact related to other public facilities if in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities, the

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Project would result in a need for new or physically altered facilities, the construction or operation of which could cause significant environmental impacts.

4.12.5.3 IMPACT DISCUSSION

SVCS-9 The Project would not result in the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.

Development of the Project, as discussed in Chapter 3, Project Description, would include the demolition and reconstruction of the Mulford-Marina library branch. The facility that would replace the existing branch would include community meeting space in addition to the community library component of this element of the Project. The new facility would be approximately 2,000 square feet in size and include a community meeting space, which would total approximately 500 square feet of additional space compared to the existing library. Given that this newly constructed and expanded facility would be constructed as a part of the Project, no additional libraries or other public facilities would be required to be built in order to accommodate the growth associated with development of the Project. The potential environmental impacts that could result from development of the new library facility are discussed throughout this Draft EIR. A *less-than-significant* impact would occur in this respect.

Applicable Regulations:

- San Leandro General Plan

Significance Before Mitigation: Less than significant.

4.12.5.4 CUMULATIVE IMPACT DISCUSSION

SVCS-10 The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to the construction of other public facilities.

The area of cumulative effect for this analysis is the city limits of the City of San Leandro. As described above, the Project would include the construction of a 2,500-square-foot library/community center on the site of the existing Mulford-Marina Branch, and on its own, the Project would not result in the need for expansion of other library facilities in order to accommodate associated growth. Other planned and reasonably foreseeable projects, as listed in Table 4-1 of Chapter 4, Environmental Analysis, in San Leandro would have the potential to substantially increase demand for library services, such that additional facilities would be needed as a result of increased population. However, as with police and other City services, planning for new facilities would be an ongoing function of the City budgeting process. Like the Project, other new development would contribute to the tax base that funds City services. In any case, the Project would result in an improvement to the library system in San Leandro beyond the impact of the Project; the Project's contribution to this cumulative impact would be *less than significant*.

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Applicable Regulations:

- San Leandro General Plan

Significance Before Mitigation: Less than significant.

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TRANSPORTATION AND TRAFFIC

4.13 TRANSPORTATION AND TRAFFIC

This chapter describes the regulatory framework and existing conditions on the Project site related to transportation and traffic, and the potential impacts of the Project on circulation in the vicinity of the Project. For the purposes of this chapter, “study area” refers to the area in the general vicinity of the Project site. This chapter was informed by analysis contained in the San Leandro Shoreline Development Project, Transportation Impact Analysis prepared by Kittelson & Associates and included in Appendix H, Transportation Impact Analysis, of this Draft EIR.

4.13.1 ENVIRONMENTAL SETTING

4.13.1.1 REGULATORY SETTING

State Regulations

It is important to note that Senate Bill (SB) 743 will alter how transportation and traffic impacts are analyzed under State CEQA Guidelines. In general, SB 743 requires that the CEQA Guidelines be amended to provide an alternative to using level of service standards for evaluation transportation impacts. While the 2015 State CEQA Guidelines will be amended to incorporate the provisions of SB 743, this draft EIR was prepared based on existing 2014 CEQA Guidelines, and therefore, relies on the existing standard of using level of service to determine potential transportation impacts.

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, design, construction, and maintenance of all interstate freeways and State routes. The department sets design standards that are often used by local governments. Interstate 880 (I-880), a freeway in the Project study area, is under Caltrans jurisdiction, as are portions of Davis Street (State Route [SR] 112) and Doolittle Drive (SR 61) from Davis Street to its north. Caltrans requirements are described in their Guide for Preparation of Traffic Impact Studies¹, which covers the information needed for Caltrans to review the impacts to State highway facilities; including freeway segments, on- and off-ramps, and signalized intersections.

Regional Regulations

Alameda County Transportation Commission

The Alameda County Transportation Commission (Alameda CTC) coordinates transportation planning efforts throughout Alameda County and programs local, regional, State and federal funding for project implementation. Additionally, it prepares the Congestion Management Program (CMP), a plan mandated by California law to describe the strategies to address congestion problems on the CMP network, which includes State highways and principal arterials. The CMP requires analysis of Metropolitan Transportation System (MTS) roadway and transit system and uses level of service standards as a means to measure

¹ California Department of Transportation, *Guide for the preparation of Traffic Impact Studies*, December 2002.

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congestion and has established level of service standards to determine how local governments meet the standards of the CMP.

Local Regulations

With the exception of State highways that are under Caltrans' jurisdiction, streets in the study area are generally under the jurisdiction of the City of San Leandro.

San Leandro General Plan

The City of San Leandro General Plan was adopted in 2002 is the primary planning document in the City and serves to guide development through 2015, at which time the next iteration of the San Leandro General Plan will replace the current version. The Transportation Element of the San Leandro General Plan provides the policy framework for the regulation and development of transportation systems, balancing demands for moving people and goods within the City. It is comprehensive, addressing vehicular, pedestrian, bicycle, transit, truck, ferry and air transportation, as well as land use. Table 4.13-1 includes the goals of the San Leandro General Plan related to transportation and traffic.

TABLE 4.13-1 SAN LEANDRO GENERAL PLAN GOALS RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal Number	Goal Text
Transportation	
Goal 13	Coordinating Land Use and Transportation – Coordinate land use and transportation planning.
Goal 14	Bicycle and Pedestrian Circulation – Promote and accommodate alternative, environmentally-friendly methods of transportation, such as walking and bicycling.
Goal 15	Public Transportation – Ensure that public transportation is safe, convenient, and affordable and provides a viable alternative to driving.
Goal 16	Streets and Highways – Improve major transportation arteries for circulation in and around the City.
Goal 17	Neighborhood Traffic Management – Minimize the adverse effects of business, industrial, and through traffic on neighborhood streets.
Goal 18	Traffic Safety – Improve traffic safety and reduce the potential for accidents on San Leandro Streets.
Goal 19	Pedestrian-Oriented Streetscape – Encourage community design principles and standards which de-emphasize automobiles.
Goal 20	Interagency Coordination – Coordinate local transportation planning with other agencies and jurisdictions.

Source: San Leandro General Plan.

Bicycle and Pedestrian Master Plan

San Leandro's Bicycle and Pedestrian Master Plan was adopted in February 2011. The plan contains an assessment of existing conditions for bicyclists and pedestrians and provides recommendations for biking and walking facilities, the interface between bicyclists and transit, and related programs. Table 4.13-2 contains Bicycle and Pedestrian Master Plan goals relevant to the proposed Project.

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TABLE 4.13-2 BICYCLE AND PEDESTRIAN MASTER PLAN GOALS

Goal Number	Goal
Goal 1	Support bicycling and walking and the development of a comprehensive bicycle and pedestrian transportation system as a viable alternative to the automobile.
Goal 2	Implement bicycle and pedestrian improvements maximizing the amount of funding for which San Leandro is eligible.
Goal 3	Develop a bicycle system that meets the needs of utilitarian and recreation users, helps reduce vehicle trips, and links residential neighborhoods with local and regional destinations.
Goal 4	Create a well-connected pedestrian environment by improving the walkability of all streets in San Leandro through the planning, implementing, and maintaining of pedestrian supportive infrastructure that meets the needs of all users.
Goal 5	Maximize bicycle and pedestrian access to transit.
Goal 6	Improve bicycle and pedestrian safety.
Goal 7	Develop detailed and ranked bicycle and pedestrian improvements.
Goal 8	Raise awareness of the benefits of walking and biking by developing a coordinated public outreach strategy to encourage bicycling and walking.
Goal 9	Develop land use policies and development standards that promote bicycling and walking for utilitarian and recreation trips.

Source: San Leandro General Plan.

4.13.1.2 EXISTING CONDITIONS

Roadway Network

The roadway network that would be affected by the proposed Project is made up of the freeway system that serves Alameda County and an extensive street system made up of arterial and local roads, as shown in Figure 4.13-1.

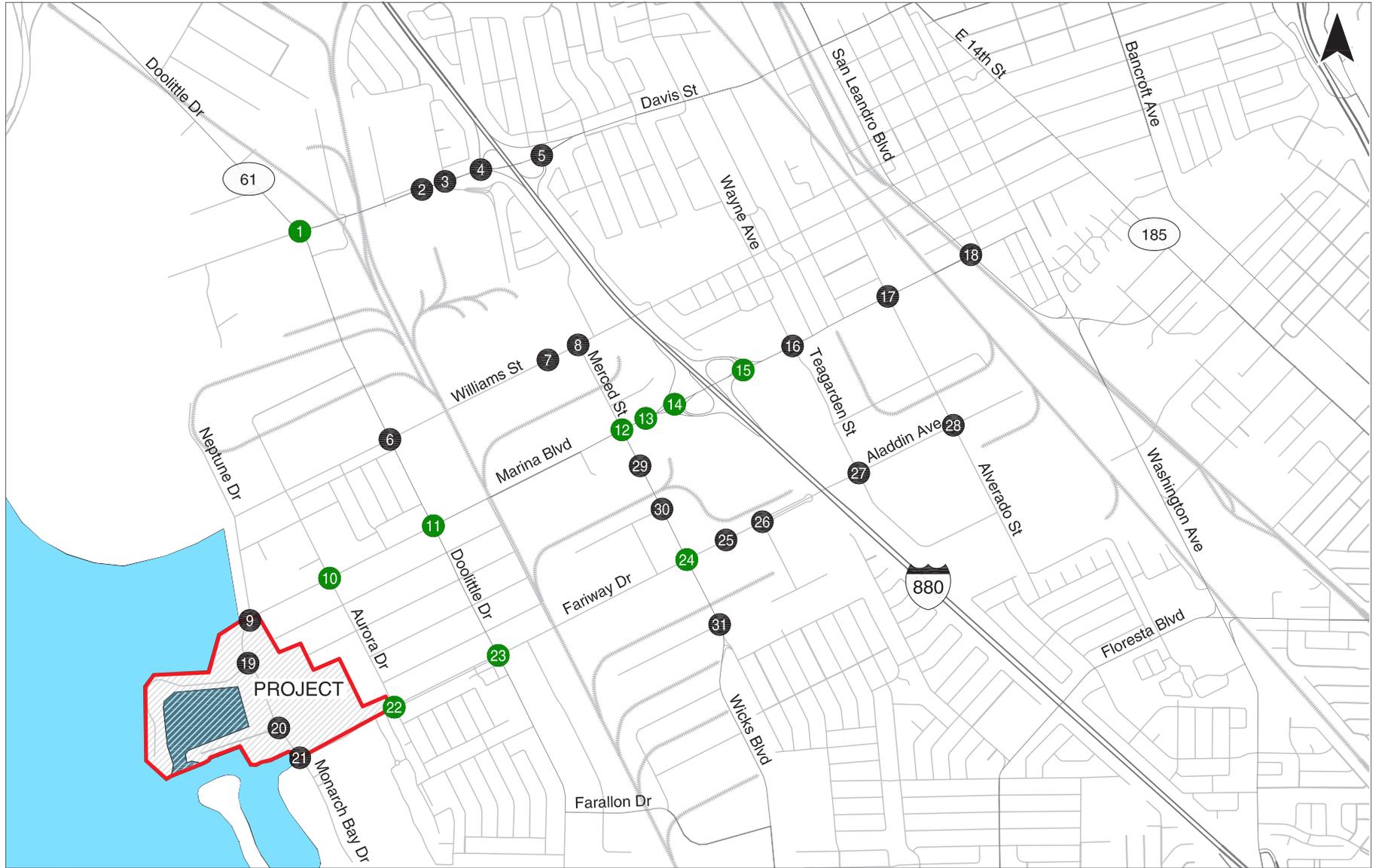
Freeways

Freeways are distinguished from other types of roadways in that abutting lands have no right or easement of access to or from their abutting lands or in some cases such owners have only limited or restricted right or easement of access.²

Interstate 880

I-880 is an 8- to 10-lane freeway with a posted speed limit of 65 miles per hour. This north-south freeway connects San Leandro with nearby cities, including Hayward and Oakland, as well as regional destinations, such as Fremont and San Jose. I-880 also provides access to the larger freeway network in the region with direct connections to Interstates 80, 580, 980, 238; U.S. Highway 101; SR 92, 237, and 17.

² California Department of Transportation, 2012, Highway Design Manual, Chapter 60 Nomenclature.



Source: Kittelson & Associates, Inc., 2014.

- - AM and PM Peak Hour Analysis
- - AM, PM and Saturday Peak Hour Analysis
- ▭ - Project Site

Figure 4.13-1
 Study Intersections

TRANSPORTATION AND TRAFFIC

The Project site is served by freeway interchanges at Marina Boulevard and Davis Street in San Leandro. The average daily traffic on I-880 in the vicinity of Marina Boulevard, the closest interchange to the Project site, ranges between 201,000 and 206,000 vehicles per day (VPD).³

Arterials

Arterial roadways are primarily for through travel and access to collector streets and local roads.⁴ The daily vehicle volumes along selected arterial roadways in the study area are shown in Table 4.13-3.

TABLE 4.13-3 TWENTY-FOUR HOUR VEHICLE COUNTS OF SELECTED ARTERIAL ROADWAYS

Roadway	Segment	Direction	Weekday	Saturday
Doolittle Drive	Marina Boulevard to Fairway Drive	Northbound	8,860	6,190
		Southbound	6,960	4,850
		Total	15,820	11,040
Doolittle Drive	Williams Street to Marina Boulevard	Northbound	8,080	4,950
		Southbound	7,170	4,625
		Total	15,250	9,575
Davis Street	Doolittle Drive to Warden-Timothy Drive	Eastbound	11,555	8,270
		Westbound	11,470	7,885
		Total	23,025	16,155
Marina Boulevard	Neptune Drive to Aurora Drive	Eastbound	2,635	3,460
		Westbound	2,355	3,190
		Total	4,990	6,650
Marina Boulevard	Doolittle Drive to Merced Street	Eastbound	9,705	9,125
		Westbound	10,050	8,940
		Total	19,755	18,065
Fairway Drive	Monarch Bay Drive to Aurora Drive	Eastbound	1,300	1,260
		Westbound	1,120	1,060
		Total	2,420	2,320
Fairway Drive	Doolittle Drive to Merced Street	Eastbound	4,725	3,080
		Westbound	4,440	2,785
		Total	9,165	5,865

Note: Counts collected on Thursday, January 17, 2013 and Saturday, January 19, 2013.
Source: Kittelson & Associates, Inc., 2013.

³ 2012 Traffic Volumes, California Department of Transportation, <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm>, accessed June 10, 2014.

⁴ California Department of Transportation, 2012, Highway Design Manual, Chapter 60 Nomenclature.

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Marina Boulevard

Marina Boulevard is a 2- to 6-lane, east-west road with a posted speed limit of 30 to 40 miles per hour. It extends from the Project area, east to Washington Avenue. The portion of Marina Boulevard closest to the Project site, between Monarch Bay Drive and Doolittle Drive, allows on-street parking on intermittent sections of the roadway and has two travel lanes. The roadway is designated as a residential arterial in the San Leandro General Plan.⁵ Sidewalks are generally available along Marina Boulevard with the exception of a portion of the roadway where it crosses over I-880, between Merced Street and Teagarden Street. Additionally, there is a railway crossing over Marina Boulevard which runs parallel along Menlo Street to the east. Walkways are limited to the southern side of the road in this area. However, as part of the I-880 interchange improvement project currently under construction, sidewalks would be provided on both sides of the Marina Boulevard Overcrossing upon its completion. In the area adjacent to the study area, Marina Boulevard is bordered by industrial, commercial and residential land uses and is also designated as a local truck route. At the western end of the roadway, Marina Boulevard becomes Monarch Bay Drive.

Fairway Drive

Fairway Drive is a 2- to 4-lane, east-west road with a posted speed limit between 30 and 40 miles per hour. It extends east from the Project area to Teagarden Street, where it becomes Aladdin Avenue and continues eastward. The street ends at the Niles Subdivision of the Union Pacific Railroad. West of Doolittle Drive, the roadway is designated as a residential collector street and is divided by raised, landscaped medians.⁶ On-street parking is allowed on intermittent sections of Fairway Drive between Nicholson Street and Doolittle Drive, although truck parking is prohibited. Sidewalks are generally provided with the exception of the overpass between Miller and Teagarden Streets where the sidewalk is only on the south side of the street. In the study area, Fairway Drive is generally bordered by industrial, residential, and public/open space land uses. Fairway Drive is located south of, and borders, the southern boundary of the Marina Golf Course.

Doolittle Drive

Doolittle Drive is a four-lane, north-south roadway with a posted speed limit of 40 miles per hour. The roadway runs from the city of Alameda to just south of the study area. North of Davis Street, Doolittle Drive is designated as SR 61. According to Caltrans, the 2012 average daily vehicle volumes in the study area were around 22,300. Doolittle Drive is designated as a local truck route and is generally bordered by industrial, commercial, and residential land uses. South of Fairway Drive, the roadway is designated as a collector.⁷

Davis Street

Davis Street is a four- to six-lane, east-west road with a posted speed limit of 35 miles per hour. It spans slightly west of Doolittle Drive and East 14th Street in downtown San Leandro where it becomes Callan

⁵ City of San Leandro, *General Plan 2002*, Transportation Element, Figure 4-2, page 4-13.

⁶ City of San Leandro, *General Plan 2002*, Transportation Element, Figure 4-2, page 4-13.

⁷ City of San Leandro, *General Plan 2002*, Transportation Element, Figure 4-2, page 4-13.

TRANSPORTATION AND TRAFFIC

Avenue. Davis Street is designated as SR 112 between Doolittle Drive and East 14th Street. In the study area, the roadway is bordered by industrial and commercial land uses. According to Caltrans, the 2012 average daily vehicle volumes in the study area were between 29,000 and 54,000, with the higher volumes near the I-880 interchange. There is a raised median and an overpass for crossing the railroad tracks between Doolittle Drive and Phillips Lane.

Davis Street is designated as a local truck route. Sidewalks are generally provided on both sides of the roadway but are limited to the south side on the overpass between Doolittle Drive and Phillips Lane and near the I-880 interchange. However, as part of the I-880 interchange improvement project under construction, upon its completion, sidewalks would be provided on both sides of Davis Street only on the new interchange structure.

Merced Street

Merced Street is a three- to four-lane, north-south road with a posted speed limit of 35 miles per hour. In the study area, the roadway is bordered by industrial and commercial land uses. Between Williams Street and Marina Boulevard, on-street parking is allowed on intermittent sections of the roadway. Sidewalks are generally provided on this roadway throughout the study area.

Collectors

Monarch Bay Drive

Monarch Bay Drive is a two-lane, north-south road that extends from Marina Boulevard and terminates at the Estudillo Canal, south of the Project site, at the southern end of Marina Park. The posted speed limit on this roadway is 30 miles per hour. There are raised medians south of Fairway Drive and a raised, landscaped median on the northern portion of the roadway near the intersection of Monarch Bay Drive and Neptune Drive. On-street parking is allowed on intermittent sections of the roadway. Sidewalk is limited to the west side of the street along the Marina Inn frontage. In the study area, Monarch Bay Drive is bordered by commercial and recreational land uses, the majority of which is within the Project site.

Neptune Drive

Neptune Drive is a two-lane, north-south roadway with a posted speed limit of 25 miles per hour that provides access to mostly residential land uses near the Project site. Sidewalks are provided on both sides of the street. On-street parking is allowed and truck parking is prohibited. Neptune Drive is a designated Class III bike route and is a part of the San Francisco Bay Trail.

Aurora Drive

Aurora Drive is a two-lane, north-south road with a posted speed limit of 25 miles per hour that primarily provides access to residences. On-street parking is allowed but truck parking is prohibited. Sidewalks are provided on both sides of the street.

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Williams Street

Williams Street is a two-lane, east-west road with a posted speed limit of 30 to 35 miles per hour. Williams Street is bordered by industrial land uses on the portion of the roadway between I-880 and Doolittle Drive. West of Doolittle Drive, Williams Street is lined with residences on the south side of the street. Williams Street, a designated local truck route, generally maintains sidewalks on both sides of the roadway.

Transit Facilities

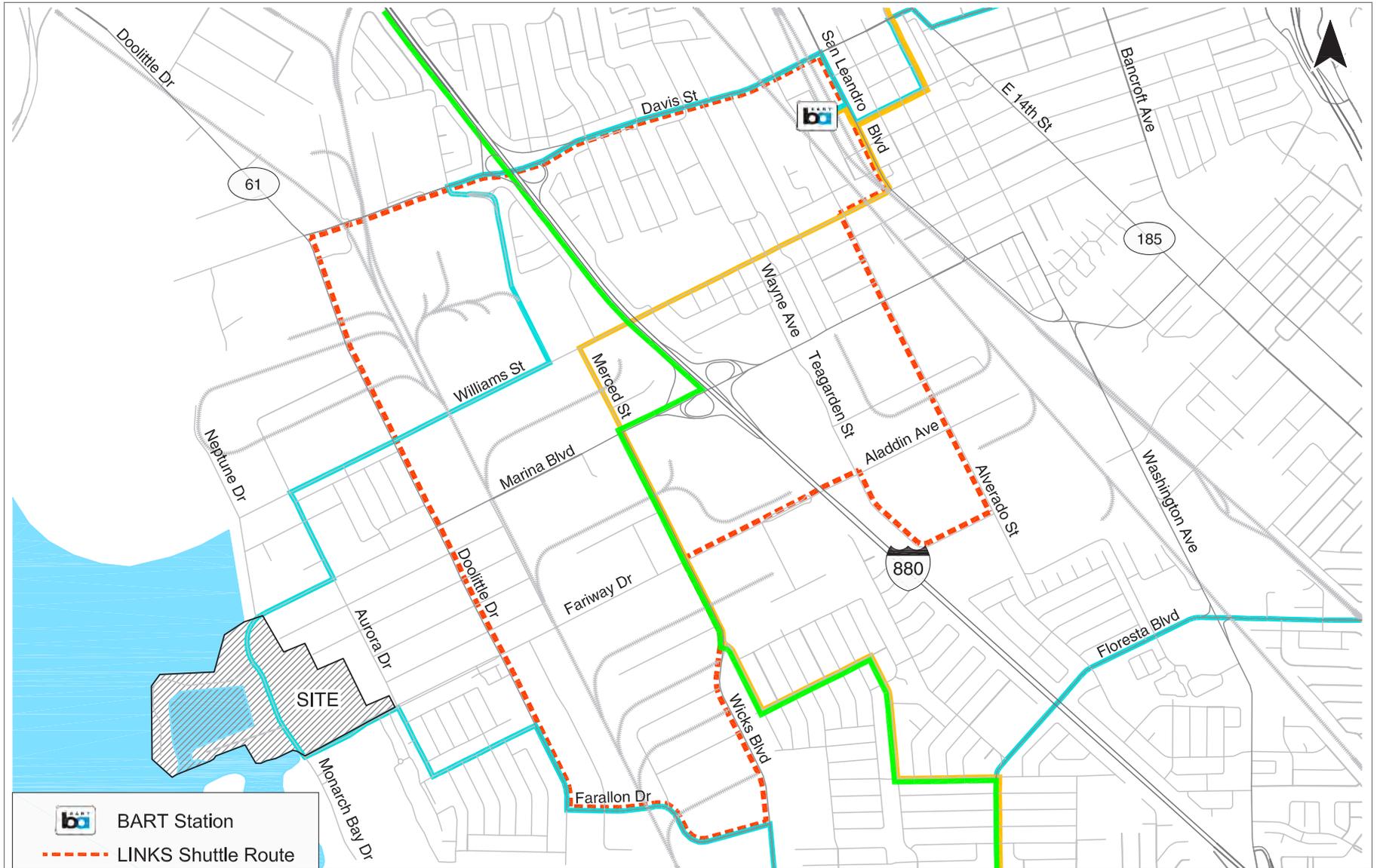
In addition to automobile facilities, the Project site is served by a variety of public transportation options which are described below.

AC Transit

AC Transit provides bus services in the Alameda and western Contra Costa Counties, serving 13 cities as well as unincorporated areas of Alameda County. The service operates local buses, school buses, as well as Transbay routes to San Francisco and the Peninsula. AC Transit is also a service provider for East Bay Paratransit: a public transit service for people who are unable to use regular buses or trains, like those operated by AC Transit and BART, because of a disability or a disabling health condition. Additionally, AC Transit is a participating transit provider for the regional, All-Nighter bus system, providing night owl bus service when BART is not operating. AC Transit buses are equipped with front-loading racks that can hold up to two bicycles.

In the study area, AC Transit operates one local bus route, Route 89. This route connects the San Leandro Shoreline Recreational Area with BART via the San Leandro Station and the Bay Fair Station, as well as other local destinations, such as Downtown San Leandro and the Bayfair Shopping Center. The nearest bus stops to the Project site, indicated with a pole and sign showing the route number, are located at Monarch Bay Drive at Mulford Point Drive and Monarch Bay Drive at Neptune Drive. Other bus routes in the study area include Local Route 75 and Transbay Route S. Bus service on these routes is detailed in Table 4.13-4 and shown in Figure 4.13-2.

Although Rapid Bus service is currently in operation with the 1R line connecting Berkeley BART to San Leandro BART, AC Transit has plans to introduce the Bus Rapid Transit (BRT) system in the East Bay. According to the *East Bay Bus Rapid Transit Project Design Workshop* conducted in November 2012, the proposed line would span 9.5 miles connecting Downtown Oakland to Downtown San Leandro. The system would include stops in Downtown San Leandro and the San Leandro BART station. A dedicated bus lane is proposed for a majority of the corridor. However, the dedicated bus lane will only span a couple of blocks in San Leandro on East 14th Street up from the northern city limit to just south of Broadmoor Boulevard. Other amenities would be provided including sheltered seating at bus stops, off-bus fare payment, real-time arrival signs, and traffic signal priority. The BRT project is expected to start construction in 2014 and open for service in 2016.



Source: Kittelson & Associates, Inc.

Figure 4.13-2
Existing Transit Facilities

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TABLE 4.13-4 AC TRANSIT BUS SERVICE IN THE STUDY AREA

Route	Serving	Timepoints	Day		Times
75	San Leandro, Ashland, Castro Valley, Oakland	San Leandro BART; Marina Blvd & Merced St; Purdue St. & Farnsworth St; Washington Ave. & Lewelling Blvd; Bay Fair BART; Estudillo Ave & MacArthur Blvd; Bancroft Ave & Dutton Ave.	Weekday	First	5:31 a.m.
				Last	8:58 p.m.
			Weekend	Frequency	60 minutes
				<i>No Service</i>	
89	San Leandro, Ashland, Castro Valley	San Leandro BART; Davis St & Hays St; Estudillo Ave & Bancroft Ave; Bay Fair BART; Washington Ave & Floresta Blvd; Farallon St & Wicks Blvd; Fairway Dr & Aurora Dr; Marina Blvd & Aurora Dr.	Weekday	First	5:15 a.m.
				Last	8:52 p.m.
				Frequency	30 minutes
			Weekend	First	7:00 a.m.
				Last	8:01 p.m.
				Frequency	60 minutes
S	San Francisco, Oakland, San Leandro, San Lorenzo, Hayward	San Francisco (Transbay Temporary Terminal); Marina Blvd & Merced St; Manor Blvd & Farnsworth St; Washington Ave & Lewelling Blvd; Paseo Grande & Hesperian Blvd; Winton Ave & Hesperian Blvd; Hesperian Blvd & Tahoe Ave; Eden Shores Park.	Weekday Eastbound	First	4:15 p.m.
				Last	8:15 p.m.
				Frequency	30 minutes
			Weekday Westbound	First	5:10 a.m.
				Last	8:50 a.m.
				Frequency	15 minutes (peak)
Weekend		<i>No Service</i>			

Sources: AC Transit website, www.actransit.org, accessed July 29, 2013; Kittelson & Associates, Inc., 2013.

LINKS

The LINKS program is a free shuttle that provides transportation between the San Leandro BART Station to major employment centers in west San Leandro. The program is funded by a Business Improvement District fee and various grants, including those from the Bay Area Air Quality Management District (BAAQMD). It is managed by the San Leandro Transportation Management Organization (SLTMO) and operated by M.V. Transportation.

The shuttle operates every 20 minutes on non-holiday weekdays from 5:45 a.m. to 9:45 a.m., and from 3:00 p.m. to 7:00 p.m. SLTMO is currently working on program enhancements that will provide more frequent service intervals, beginning in 2015. The LINKS program has two bus stops close to the Project site located on Doolittle Drive at Marina Boulevard and at Fairway Drive.

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FLEX Shuttle

The City of San Leandro provides transportation for seniors and people with disabilities through the FLEX Shuttle service. Riders must be residents of San Leandro and must be 60 years of age or older, or at least 18 years of age and East Bay Paratransit certified.⁸ FLEX Shuttle requires an annual registration fee of \$20 along with an application which must be renewed by June 30 of each year in order to continue using the shuttle; however, after the annual fee is paid, the shuttle can be used at no additional charge. The shuttle operates Monday through Friday between 9:00 a.m. and 5:00 p.m. and operates a north and south route. The northern route operates in the northern portion of San Leandro and the southern route operates in the southern half of the City. Each route has 10 stops at various locations.

BART

Bay Area Rapid Transit (BART) provides heavy-rail, regional transit service to the Counties of Alameda, San Francisco, Contra Costa, and San Mateo. The BART station closest to the Project site is the San Leandro BART Station, located at Davis and San Leandro Streets about 2.9 miles northeast of the Project site.

BART's direct service from this station includes the Richmond-Fremont line, the Dublin-Pleasanton/Daly City-Millbrae line, and the Fremont/Daly City line. Table 4.13-5 summarizes the BART service from the San Leandro station.

Amtrak

Amtrak operates interstate and intercity heavy rail service. Its Capital Corridor and Coast Starlight routes run through San Leandro. However, there are currently no Amtrak stops within the city. The Capital Corridor route is served by the Oakland Coliseum Station, which is also adjacent to a BART station, located about five miles north from of the Project site. The Coast Starlight route is served by the Oakland Jack London Square Station, ten miles northwest of the Project site. The current San Leandro General Plan calls for further exploration of an Amtrak station stop in San Leandro, possibly near the San Leandro BART station. Marina Boulevard crosses the Amtrak railway east of the Project Area, between Alvarado Street and San Leandro Boulevard,

Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities are important components of the transportation network in the study area. They not only offer non-motorized opportunities for travel, but also provide connections to BART and bus stations to allow access to the public transportation network.

Existing Bicycle Facilities

According to the San Leandro Bicycle and Pedestrian Master Plan and field observations, the following bikeways are currently present within the study area:

⁸ City of San Leandro, FLEX Shuttle Service, <https://www.sanleandro.org/depts/rec/paratransit.asp#flexsvc>, accessed on November 12, 2014.

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TABLE 4.13-5 BART SERVICE FROM THE SAN LEANDRO BART STATION

Line	Day	Times	
Fremont/Richmond	Weekday	First	4:20 a.m.
		Last	1:10 a.m.
		Frequency	15-20 minutes
	Saturday	First	6:15 a.m.
		Last	1:10 a.m.
		Frequency	20 minutes
	Sunday	First	8:15 a.m.
		Last	1:10 a.m.
		Frequency	20 minutes
Dublin-Pleasanton/Daly City - Millbrae.	Weekday	First	4:35 a.m.
		Last	12:40 a.m.
		Frequency	15-20 minutes
	Saturday	First	6:20 a.m.
		Last	12:40 a.m.
		Frequency	20 minutes
	Sunday	First	8:20 a.m.
		Last	12:40 a.m.
		Frequency	20 minutes
Fremont/Daly City	Weekday	First	5:30 a.m.
		Last	7:40 p.m.
		Frequency	15 minutes
	Saturday	First	9:10 a.m.
		Last	7:40 p.m.
		Frequency	20 minutes
	Sunday	<i>No direct service</i>	

Sources: BART Fares and Schedules, accessed December 31, 2013; Kittelson & Associates, Inc., 2013.

Class I Bike Paths

- Oyster Bay Regional Shoreline.
- Intermittent sections of Pescador Point Drive and Mulford Point Drive. These paths are part of the San Francisco Bay Trail. When complete, the Bay Trail would allow continuous pedestrian and bicycle travel around the shoreline of San Francisco Bay.

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Class II Bike Lanes

- Davis Street between Gilmore Drive and the railroad tracks west of Alvarado Street
- Williams Street between Neptune Drive and San Leandro Boulevard
- Fairway Drive between Monarch Bay Drive and Miller Street
- Aladdin Avenue between Teagarden Street and Alvarado Street
- Teagarden Street between Aladdin Avenue and Alvarado Street
- Doolittle Drive between the city limit to the north and Williams Street and between Fairway Drive and Farallon Drive
- Westgate Parkway between Walmart driveway and Williams Street
- Alvarado Street between West Estudillo Avenue and Thornton Street
- Alvarado Street between Marina Boulevard and Aladdin Avenue
- San Leandro Boulevard between Davis Street and Washington Boulevard
- Merced Street between Marina Boulevard and Fairway Drive

Class III Bike Routes

- Neptune Drive between Oyster Bay Regional Shoreline entrance and Marina Boulevard. This is part of the San Francisco Bay Trail.
- Fairway Drive-Aladdin Avenue between Miller Street and Teagarden Street
- Alvarado Street between Teagarden Street and Fremont Avenue

Bicyclist Volumes

Bicyclists were counted at selected study intersections between January and May 2013. The highest volumes were found within the Project site at the intersection of Monarch Bay Drive and Pescador Point Drive, where 26 bicyclists were observed during the midday hour on Saturday. Table 4.13-6 shows the peak hour volumes during weekday AM and PM and Saturday midday at six representative study intersections.

Existing Pedestrian Facilities

Adjacent to the Project site on Monarch Bay Drive, from Fairway Drive to Neptune Drive, pedestrian facilities are limited. Four-foot wide sidewalks are provided only at intermittent sections on the west side of the roadway. No sidewalks are provided on the eastern side along Monarch Bay Drive along the border of the nine-hole Marina Golf Course. Roadways used to get to the Project site such as Neptune Drive, Marina Boulevard, and Fairway Drive are generally provided with concrete sidewalks in good condition on both sides of the street.

Other than at the intersection of Monarch Bay Drive and Fairway Drive (#21), marked crosswalks are not provided along Monarch Bay Drive. However, pedestrian ramps are present at nearly all intersection corners in the study area. Currently, these pedestrian ramps lack truncated domes for visually impaired pedestrians.

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TABLE 4.13-6 BICYCLE VOLUMES AT SELECTED INTERSECTIONS

Intersection	Peak	Times	Volumes
Aurora Drive and Fairway Drive	AM	7:15 a.m. – 8:15 a.m.	2
	PM	5:00 p.m. – 6:00 p.m.	13
	Saturday	11:30 a.m. – 12:30 p.m.	4
Merced Street and Marina Boulevard	AM	7:30 a.m. – 8:30 a.m.	-
	PM	4:30 p.m. – 5:30 p.m.	-
	Saturday	12:45 p.m. – 1:45 p.m.	8
Doolittle Drive and Fairway Drive	AM	7:30 a.m. – 8:30 a.m.	-
	PM	4:45 p.m. – 5:45 p.m.	-
	Saturday	12:45 p.m. – 1:45 p.m.	4
Aurora Drive and Marina Boulevard	AM	7:30 a.m. – 8:30 a.m.	-
	PM	5:00 p.m. – 6:00 p.m.	-
	Saturday	11:45 p.m. – 12:45 p.m.	11
Monarch Bay Drive and Mulford Point Drive	AM	8:00 a.m. – 9:00 a.m.	1
	PM	5:00 p.m. – 6:00 p.m.	7
	Saturday	12:00 p.m. – 1:00 p.m.	19
Monarch Bay Drive and Pescador Point Drive	AM	8:00 a.m. – 9:00 a.m.	1
	PM	4:45 p.m. – 5:45 p.m.	9
	Saturday	12:00 p.m. – 1:00 p.m.	26

Note: Counts conducted by Marks Traffic Data on Thursday, January 17, 2013 for the AM (7:00 to 9:00 a.m.) and PM (4:00 to 6:00 p.m.) peak-hours and Saturday, February 2, 2013 from 10:00 a.m. to 2:00 p.m. for Intersection #10, #14, and #26. Counts were conducted separately for Intersections #5, #28 and #29 on Thursday, May 30, 2013 for the AM and PM peak-hours and Saturday, May 18, 2013.

Source: Kittelson & Associates, Inc., 2013.

Pedestrian Volumes

Pedestrians were counted at six intersections in the study area in February and May 2013. The highest pedestrian volumes were observed at the Aurora Drive and Fairway Drive intersection (#22) during all three observation periods. The lowest pedestrian volumes were recorded along Monarch Bay Drive at Mulford Point Drive (#19) and Pescador Point Drive (#20). Only one pedestrian was observed on either intersection during the Saturday peak-hour. Table 4.13-7 shows the observed volumes at six selected study intersections.

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TABLE 4.13-7 PEDESTRIAN VOLUMES AT SELECTED INTERSECTIONS

Intersection	Peak	Times	Volumes
Aurora Drive and Fairway Drive	AM	7:15 a.m. – 8:15 a.m.	21
	PM	5:00 p.m. – 6:00 p.m.	14
	Saturday	11:30 a.m. – 12:30 p.m.	24
Merced Street and Marina Boulevard	AM	7:30 a.m. – 8:30 a.m.	-
	PM	4:30 p.m. – 5:30 p.m.	-
	Saturday	12:45 p.m. – 1:45 p.m.	8
Doolittle Drive and Fairway Drive	AM	7:30 a.m. – 8:30 a.m.	-
	PM	4:45 p.m. – 5:45 p.m.	-
	Saturday	12:45 p.m. – 1:45 p.m.	14
Aurora Drive and Marina Boulevard	AM	7:30 a.m. – 8:30 a.m.	-
	PM	5:00 p.m. – 6:00 p.m.	-
	Saturday	11:45 p.m. – 12:45 p.m.	14
Monarch Bay Drive and Mulford Point Drive	AM	8:00 a.m. – 9:00 a.m.	4
	PM	5:00 p.m. – 6:00 p.m.	1
	Saturday	12:00 p.m. – 1:00 p.m.	1
Monarch Bay Drive and Pescador Point Drive	AM	8:00 a.m. – 9:00 a.m.	8
	PM	4:45 p.m. – 5:45 p.m.	6
	Saturday	12:00 p.m. – 1:00 p.m.	1

Notes: Counts for Intersection #10, #14, and #26 conducted on Saturday, February 2, 2013 from 10:00 a.m. to 2:00 p.m.. No AM and PM peak period counts were conducted at these three locations. Counts for Intersections #5, #28 and #29 were conducted on Thursday, May 30, 2013 for the AM and PM peak-hours and Saturday, May 18, 2013.

Source: Kittelson & Associates, Inc., 2013

Goods Movement

The abundance of nearby industrial and commercial uses has resulted in a variety of infrastructure components related to goods movement.

Railroad Crossings

Some of the roadways in the study area are bisected by at-grade railroad crossings, which are owned and operated by Union Pacific Railroad (UPRR). As observed during a field survey, all of the at-grade crossings in the study area appeared to be provided with adequate features to facilitate traffic crossings for vehicles, pedestrians and bicyclists, including concrete rail crossing panels, warning bells, and crossing gates.

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Truck Routes

Within the San Leandro General Plan, the City of San Leandro has established a two-tier truck route system on city-operated roadways.⁹ The first tier is for through trips, where the origin and destination of the trucks are not within the city limits. The second tier is for local access trips where the origin or destination is in San Leandro. For sites in San Leandro that are not on the local truck routes, trucks must access the designated truck routes as directly as possible to their origin or from their destination. San Leandro Boulevard and portions of Washington Avenue are designated truck routes for through trips in the study area; the following roadways are designated as local truck routes:

- Davis Street, Marina Boulevard and Fairway Drive east of Doolittle Drive
- Williams Street west of I-880
- Alvarado Street south of Marina Boulevard
- Doolittle Drive
- Merced Street

Existing Traffic Conditions

In order to ascertain the existing traffic and circulation conditions in the Project study area, existing operations of the study intersections, freeway mainline segments, and ramp merge and diverge areas were assessed. This assessment was based on data collected from several sources. Intersection turning movement volumes were collected at the study intersections during typical weekday morning (AM) peak period (7:00 a.m. to 9:00 a.m.) and afternoon (PM) peak period (4:00 p.m. to 6:00 p.m.) and during Saturday midday period (10:00 a.m. to 2:00 p.m.) in January 2013. The existing intersection volumes and lane geometries are shown in Figure 4.13-3 and Figure 4.13-4. Freeway volumes were compiled from Caltrans' Performance Measurement System (PeMS) in January 2014. These volumes are shown in Table 4.13-8.

Analysis Methodologies and Level of Service Standards

"Levels of Service" describe the operating conditions experienced by motorists. Level of service (LOS) is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, driving comfort, and convenience. LOS are designated "A" through "F" from best to worst, which cover the entire range of traffic operations that might occur. LOS "A" through "E" generally represents traffic volumes at less than roadway capacity, while LOS "F" represents over capacity and/or forced flow conditions.

⁹ City of San Leandro, *General Plan 2002*, Transportation Element, Figure 4-3, page 4-17.

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TABLE 4.13-8 EXISTING FREEWAY VOLUMES AND LEVEL OF SERVICE

Location	Type	Existing – AM Peak Hour			Existing – PM Peak Hour		
		Volume ^a	Density ^b	LOS ^c	Volume ^a	Density ^b	LOS ^c
I-880 Northbound							
Washington Ave to Marina Blvd	Mainline	7,957	28.0	D	7,161	24.7	C
Marina Blvd to Davis St	Mainline	8,356	36.2	E	7,426	32.7	D
	Weave ^d	1,563	N/A	B	1,953	N/A	C
Davis St to 98th Ave	Mainline	6,151	26.9	D	5,695	24.5	C
I-880 Southbound							
98th Ave to Davis St	Mainline	5,619	24.2	C	6,340	27.9	D
Davis St to Marina Blvd	Mainline	6,584	26.0	C	7,712	32.3	D
	Weave ^d	1,164	N/A	A	1,471	N/A	B
Marina Blvd to Washington Ave	Mainline	6,153	21.0	C	7,508	26.1	D

a. Volume = vehicles per hour (vph)

b. Density = passenger car per mile per lane (pc/m/ln)

c. LOS = Level of Service

d. Marina Blvd. to Davis St. analyzed as a weaving section using the Leisch Method as described in the Caltrans Design Manual, May 7, 2012. The volume shown for this segment is the weaving volume.

Source: Kittelson & Associates, Inc., 2014.

Intersection

Intersection analyses were conducted using the methodology outlined in the 2000 Highway Capacity Manual (HCM)¹⁰ and Synchro software tool as required by the City of San Leandro.

- **Signalized Intersection.** The HCM procedure calculates a weighted average stop delay in seconds per vehicle at a signalized intersection and assigns a level of service designation based upon the delay.
- **Unsignalized Intersection.** The HCM methodology calculates a weighted average stop delay in seconds per vehicle for each controlled intersection leg and for the intersection as a whole. A level of service designation is assigned based upon the weighted average control delay per vehicle on the intersection leg with the worst delay at one- or two-way stop-controlled intersections. For all-way stop-controlled intersections, a level of service designation is based upon the weighted average control delay for all intersection legs, similar to the level of service designation for signalized intersections.

Table 4.13-9 presents the relationship of average delay to level of service for both signalized and stop controlled intersections.

¹⁰ Transportation Research Board, Washington, D.C., 2000

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TABLE 4.13-9 LEVEL OF SERVICE DEFINITION FOR INTERSECTIONS

Signalized Intersection Average Delay Per Vehicle (Seconds)	LOS	Description of Traffic Conditions	Unsignalized Intersection Average Delay Per Vehicle (Seconds)
≤10.0	A	Free flowing. Most vehicles do not have to stop.	≤10.0
>10.0 and ≤ 20.0	B	Minimal delays. Some vehicles have to stop, although waits are not bothersome.	>10.0 and ≤ 15.0
>20.0 and ≤ 35.0	C	Acceptable delays. Significant numbers of vehicles have to stop because of steady, high traffic volumes. Still, many pass without stopping.	>15.0 and ≤ 25.0
>35.0 and ≤ 55.0	D	Tolerable delays. Many vehicles have to stop. Drivers are aware of heavier traffic. Cars may have to wait through more than one red light. Queues begin to form, often on more than one approach.	>25.0 and ≤ 35.0
>55.0 and ≤ 80.0	E	Significant delays. Cars may have to wait through more than one red light. Long queues form, sometimes on several approaches.	>35.0 and ≤ 50.0
>80.0	F	Excessive delays. Intersection is jammed. Many cars have to wait through more than one red light, or more than 60 seconds. Traffic may back up into “up-stream” intersections.	>50.0

Source: Transportation Research Board, Highway Capacity Manual, Washington, D.C., 2000.

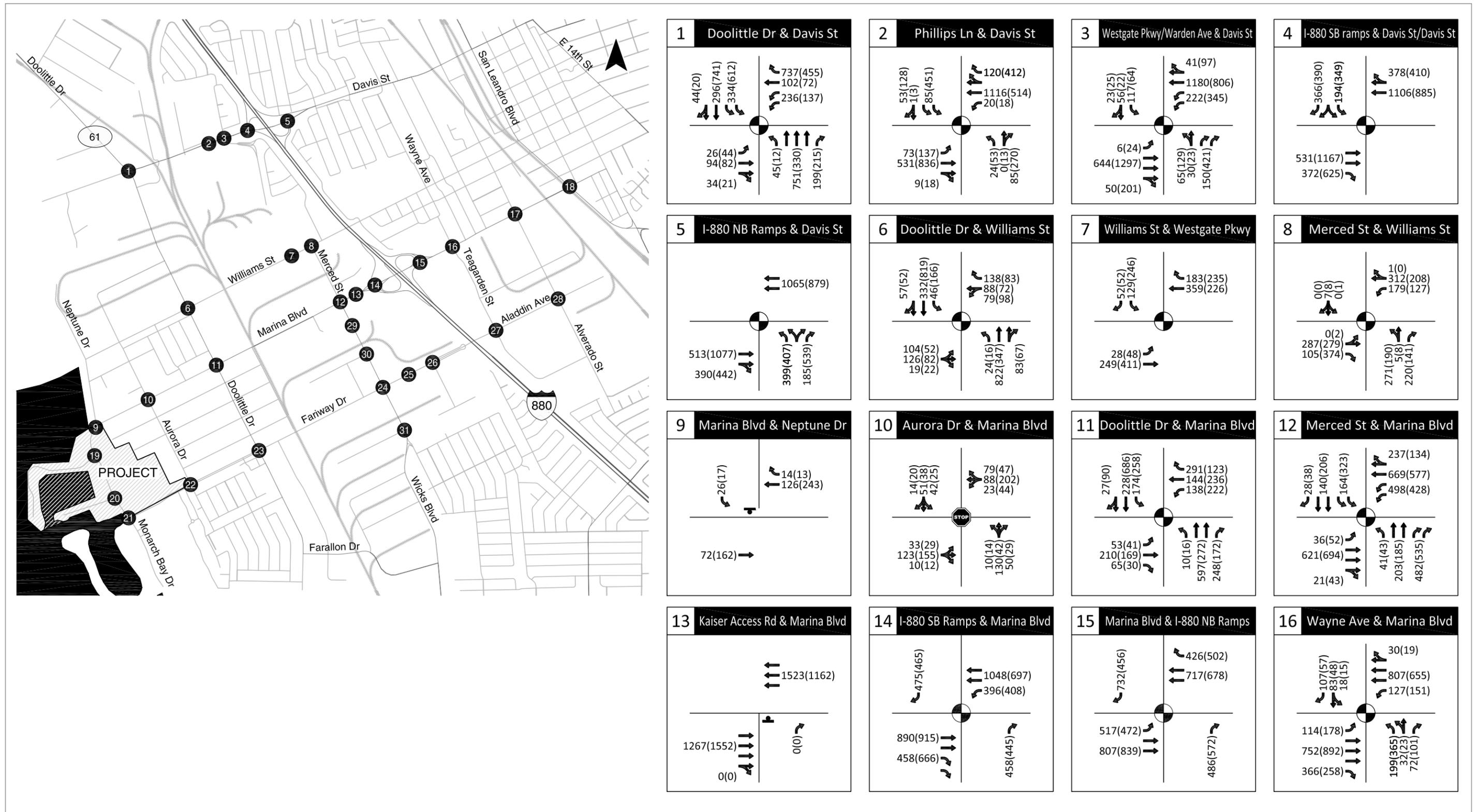
Freeway Mainline Segments

To assess circulation system performance, to determine the level of service threshold from LOS A to F, and to analyze the Congestion Management Program (CMP), the methodology outlined in the HCM and Highway Capacity Software (HCS) tool used to calculate the density, in terms of passenger cars per mile, per lane. Table 4.13-10 shows the relationship of freeway density to level of service.

TABLE 4.13-10 LEVEL OF SERVICE DEFINITION FOR FREEWAY MAINLINE SEGMENT

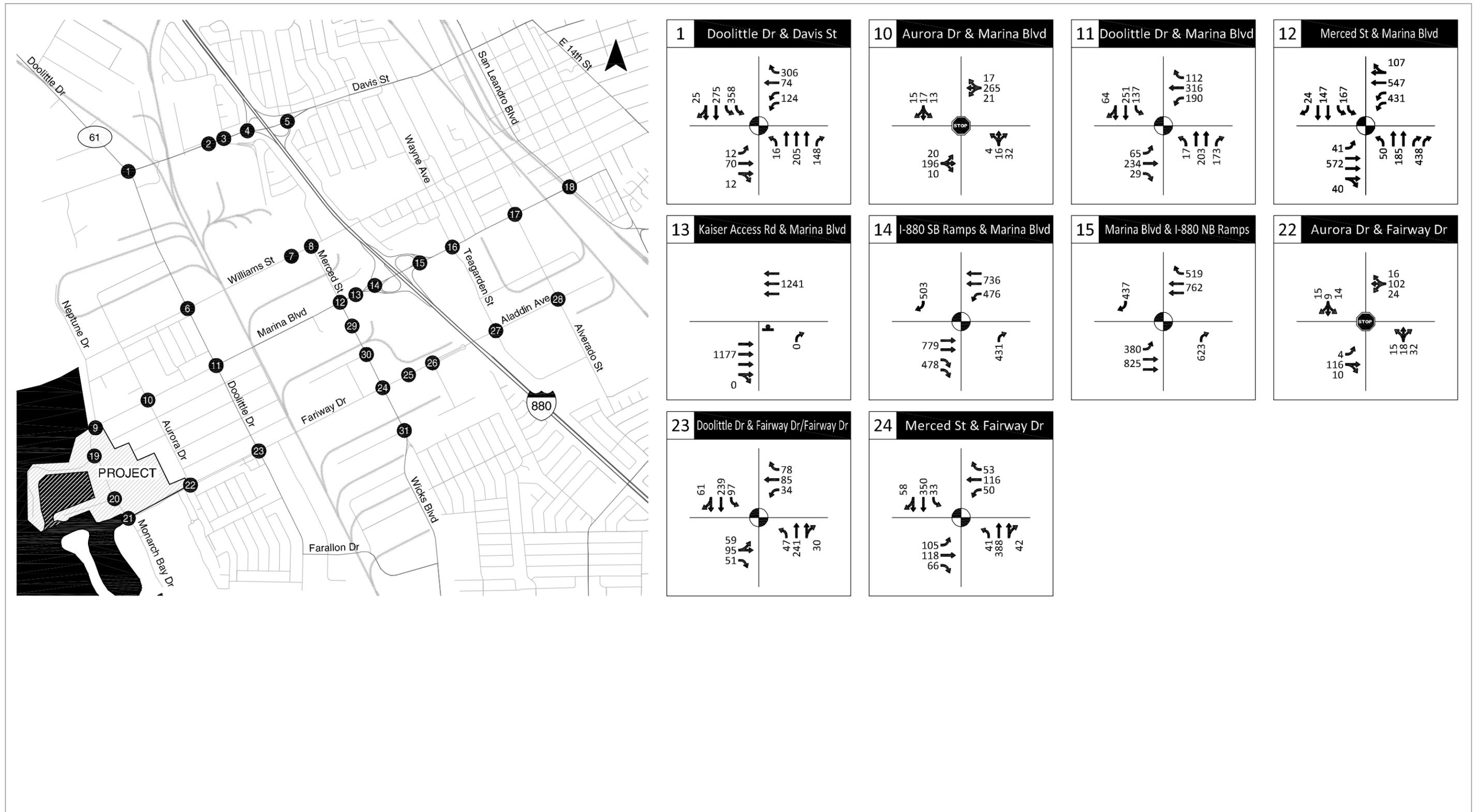
LOS	Density (passenger vehicles per mile per lane)
A	≤11
B	>11-18
C	>18-26
D	>26-35
E	>35-45
F	>45 Demand exceeds capacity

Source: Transportation Research Board, *Highway Capacity Manual* Washington, D.C., 2010, 11-7.



Source: Kittelson & Associates, Inc.

Figure 4.13-3
Existing Week Day Peak Hour Intersection Traffic Volumes and Lane Configurations



Source: Kittelson & Associates, Inc.

Figure 4.13-4
Existing Saturday Hour Intersection Traffic Volumes and Lane Configurations

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Freeway Weaving Analysis

For the circulation system performance analysis, freeway weaving segments were analyzed using the Leisch Method as described in the Caltrans Design Manual, dated May 7, 2012. Freeway weaving conditions are dependent upon traffic volumes, weaving length between the interchanges, lane configurations, and free-flow speed of the freeway segment. Weaving analysis is typically applicable for freeway segments where the distance between an on-ramp and a downstream off-ramp is less than 2,500 feet.

CMP Arterial Segment Analysis

Level of service analysis for designated Metropolitan Transportation System (MTS) arterial segments was performed based on the service volume table shown in Exhibit 10-7 of the HCM 2000. A volume to capacity ratio was calculated using the volumes from the Alameda Countywide Travel Demand Model and using the LOS F service volume threshold shown in Exhibit 10-7 of the HCM 2000 as the estimate for roadway capacity.

Existing Freeway Levels of Service

Table 4.13-8 presents the level of service on the study freeway segments under existing conditions. As shown in this table, all study segments are experiencing LOS D or better, with the exception of the I-880 northbound segment between Marina Boulevard and Davis Street. This mainline segment experiences LOS E during the AM peak hour.

Existing Intersection Levels of Service

Intersection turning movement volumes, lane configurations, and traffic control conditions were used to calculate the level of service at the study intersections. As shown in Table 4.13-11, all study intersections operate at LOS D or better.

4.13.2 STANDARDS OF SIGNIFICANCE

The proposed development of the Plan area would result in a significant impact with regard to transportation and traffic if it would:

1. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit, non-motorized travel, and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
2. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

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TABLE 4.13-11 INTERSECTION LEVEL OF SERVICE – EXISTING CONDITIONS

	North/South Street	East/West Street	Control	AM Peak Hour		PM Peak Hour		Saturday Midday Hour			
				Delay	LOS	Delay	LOS	Delay	LOS		
1	Doolittle Drive (SR 61)	Davis Street (SR 112)	Signalized	24.8	C	20.1	C	18.2	B		
2	Phillips Lane	Davis Street (SR 112)	Signalized	20.9	C	29.4	C				
3	Warden Avenue-Timothy Drive	Davis Street (SR 112)	Signalized	19.2	B	29.5	C				
4	I-880 Southbound ramps	Davis Street (SR 112)	Signalized	12.1	B	12	B				
5	I-880 Northbound ramps	Davis Street (SR 112)	Signalized	13.7	B	16.8	B				
6	Doolittle Drive	Williams Street	Signalized	19.5	B	16.1	B				
7	Westgate Parkway	Williams Street	Signalized	16.4	B	25.5	C				
8	Merced Street	Williams Street	Signalized	38.2	D	28.3	C				
9	Neptune Drive	Marina Boulevard	TWSC	1.4 (9.7)	A (A)	0.5 (11.3)	A (B)				
10	Aurora Drive	Marina Boulevard	AWSC	11.4 (11.8)	B (B)	10.8 (11.9)	B (B)	9.7 (10.3)	A (B)		
11	Doolittle Drive	Marina Boulevard	Signalized	34.7	C	36	D	30.7	C		
12	Merced Street	Marina Boulevard	Signalized	37.8	D	39.8	D	36.9	D		
13	Kaiser Access Driveway	Marina Boulevard	TWSC	Future Intersection							
14	I-880 Southbound ramps	Marina Boulevard	TWSC	5.0 (17.9)	A (C)	6.5 (21.1)	A (C)	5.6 (16.1)	A (C)		
15	I-880 Northbound ramps	Marina Boulevard	TWSC	10.0	A (D)	4.9 (18.6)	A (C)	3.7 (14.9)	A (B)		
16	Wayne Avenue-Teagarden Street	Marina Boulevard	Signalized	24.3	C	30.7	C				
17	Alvarado Street	Marina Boulevard	Signalized	24.2	C	20.6	C				
18	San Leandro Boulevard	Marina Boulevard	Signalized	44.8	D	36	D				
19	Monarch Bay Drive	Mulford Point Drive	AWSC	7.7 (7.8)	A (A)	8.5 (8.7)	A (A)				
20	Monarch Bay Drive	Pescador Point Drive	AWSC	7.6 (7.7)	A (A)	7.8 (7.9)	A (A)				
21	Monarch Bay Drive	Fairway Drive	AWSC	7.9 (8.1)	A (A)	9.1	A				
22	Aurora Drive	Fairway Drive	AWSC	8.2 (8.4)	A (A)	8.5 (9.1)	A (A)	8.1 (8.6)	A (A)		
23	Doolittle Drive	Fairway Drive	Signalized	16.8	B	16	B	14.5	B		
24	Merced Street	Fairway Drive	Signalized	32.8	C	30.1	C	28.1	C		
25	Garfield Drive	Fairway Drive	Signalized	3.0	A	3.7	A				
26	Miller Street	Fairway Drive	Signalized	6.7	A	11.9	B				
27	Aladdin Avenue	Teagarden Street	Signalized	12.4	B	14.5	B				
28	Aladdin Avenue	Alvarado Street	Signalized	24.4	C	21.7	C				

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TABLE 4.13-11 INTERSECTION LEVEL OF SERVICE – EXISTING CONDITIONS

	North/South Street	East/West Street	Control	AM Peak Hour		PM Peak Hour		Saturday Midday Hour	
				Delay	LOS	Delay	LOS	Delay	LOS
29	Merced Street	Wells Fargo Driveway	Signalized	1.2	A	4.4	A		
30	Merced Street	Republic Avenue	TWSC	0.7 (25.0)	A (C)	1.1 (26.3)	A (D)		
31	Merced Street	West Avenue 140th	Signalized	2.3	A	4.1	A		

Notes: TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach.

Saturday Midday LOS data were provided for a limited set of key intersections located near the Project site.

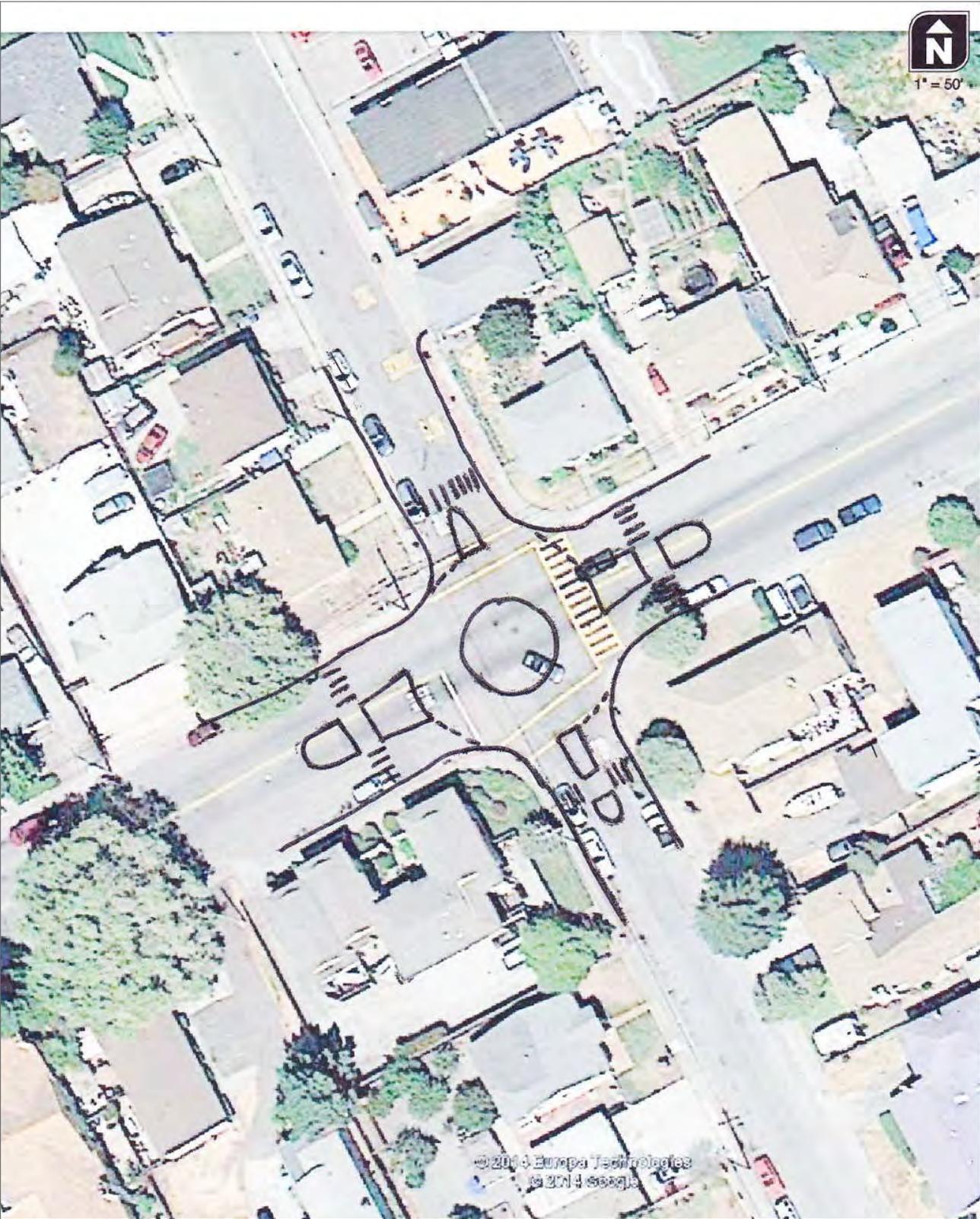
Source: Kittelson & Associates, 2014.

4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
5. Result in inadequate emergency access.
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

4.13.3 IMPACT DISCUSSION

TRAF-1 The proposed Project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit, non-motorized travel, and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

The San Leandro General Plan contains level of service standards for intersection operations at both signalized intersections and unsignalized intersections. San Leandro General Plan Policy 16.02 in the Transportation Element states that the minimum acceptable level of service is LOS D for streets and intersections, unless otherwise indicated in the Transportation Element. In the discussion of level of service on page 4-20 in the San Leandro General Plan, it is explained that LOS D may only be exceeded under two circumstances. These circumstances are if road improvements are not possible because the necessary right-of-way does not exist and cannot be acquired without significant impacts on adjacent buildings and properties or if the intersection or road segment is in a pedestrian district, such as Downtown, where the priority is on pedestrian, bicycle, and public transit access rather than vehicle traffic.



0 100
Scale (Feet)



Source: Kittelson & Associates, Inc.

Figure 4.13-5
Marina Boulevard/Aurora Avenue Mini-Roundabout Concept

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For the purposes of this study, significant traffic impacts at intersections in the study area are identified if the Project causes:

- An intersection to operate at LOS E or F; or
- An increase in the volume-to-capacity (v/c) ratio¹¹ of 0.05 or more for signalized intersections that operate at LOS E or F under No Project conditions; or
- An increase in average delay of more than 5 seconds on the worst approach for unsignalized intersections that operate at LOS E or F under No Project conditions.

For freeways, Caltrans seeks to maintain a target level of service at the transition between LOS C and LOS D. However, Caltrans acknowledges that this may not always be feasible. Therefore, if an existing State highway facility is operating at less than the appropriate target level of service, Caltrans seeks to have the existing Measure of Effectiveness (MOE) be maintained.

For the purposes of this study, significant traffic impacts on I-880 in the study area are identified if the Project causes:

- The operations of a freeway segment or ramp to deteriorate from LOS D or better to LOS E or F; or
- An increase in the amount of vehicle traffic on a freeway segment already operating at LOS E or F by more than 1 percent of the freeway segment's design capacity.

Project Trip Generation

The Project would potentially generate about 9,408 trips on a typical weekday of which 8,752 are new external vehicular trips, as shown in Table 4.13-12. Of the external trips, 1,040 trips would occur during the weekday morning peak hour and 1,060 trips during the weekday evening peak hour. The Project is also projected to generate 909 trips during the Saturday midday hour of which 860 are new external trips. The trip generation data was incorporated into the Alameda Countywide Travel Demand Model (Countywide Model) to project the number of background and project trips for analysis.

Project Trip Distribution and Assignment

The Countywide Model was also used to distribute new trips associated with development of the proposed Project to and from the Project site and to assign them onto the roadway network for each of the analysis conditions. As San Leandro and adjacent communities develop, land uses and roadway network vary between the three different analysis conditions (2014, 2020, and 2035). Therefore, the distribution patterns of the Project trips may also vary slightly.

¹¹ The V/C ratio is calculated by comparing the peak hour link volume to the peak hour capacity of the road link.

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TABLE 4.13-12 PROJECT TRIP GENERATION

Trip Generation Land Use Category	Amount	Source	Weekday	Trips Generated								
				AM Peak Hour			PM Peak Hour			Saturday		
				In	Out	Total	In	Out	Total	In	Out	Total
Office	150.0 KSF	ITE (710)	1,787	233	32	265	33	164	197	35	30	65
Café	8.0 KSF	ITE (932) ^a	1,017	47	39	86	47	32	79	60	53	113
Restaurant – Quality	13.0 KSF	ITE (931) ^b	1,169	6	5	11	65	32	97	83	58	141
Conference Center ^c	15.0 KSF	n/a	1,500	281	50	331	50	281	331	140	25	165
Hotel	200 Rooms	ITE (310)	1,417	63	43	106	61	59	120	80	62	142
Apartment	159 Units	ITE (220) ^d	1,087	16	66	82	68	37	105	42	42	84
Townhome/Condo	153 Units	ITE (230)	931	12	61	73	57	28	85	47	40	87
Single-Family Detached	42 Units	ITE (210)	473	10	29	39	30	18	48	25	21	46
Park/Open Space	14.48 Acres	ITE (411) ^e	27	36	29	65	29	22	51	33	33	66
Total Project Trips			9,408	704	354	1,058	440	673	1,113	545	364	909
Internal Trips ^f			-656	-9	-8	-18	-26	-25	-53	-24	-24	-49
New External Trips			8,752	695	346	1,040	414	648	1,060	521	340	860

a. ITE's High-Turnover (Sit Down) Restaurant category is applied to the Café land use.

b. The AM peak hour distribution percentage for the High-Turnover (Sit Down) Restaurant category is applied to the Quality Restaurant.

c. Data on conference center or similar category are not available in the ITE manual; therefore, the trip generation was calculated based on a set of assumptions on the anticipated use of the facility. It is projected that the 15,000 square-foot facility has a 20-square foot per person capacity and that 75 percent of guests would arrive within the AM and Saturday peak hours and depart within the PM peak hour in vehicles that have an average occupancy of two persons per vehicle.

d. Apartments are assumed to be for rent units; while other residential units are assumed to be for sale units.

e. ITE's City Park category is applied to the Park/Open Space land use.

f. Internal capture adjustments are made between Hotel and Conference Center uses, and between Restaurant, Residential/Hotel, and Office uses.

Source: Trip Generation Manual and User's Guide and Handbook 9th Edition; Kittelson & Associates, 2014.

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Circulation System Performance

The performance of the intersections and freeway locations which were analyzed was assessed for the period before the opening of the proposed Project but after the completion of currently planned or underway construction improvements and developments (Baseline Conditions) and for future planning years 2020 and 2035 (**Near-Term Cumulative Conditions** and **Long-Term Cumulative Conditions**). The process through which the background and Project-generated traffic were developed is first described below, followed by impact assessments of each analysis conditions.

Traffic Volume Forecasting Approach

The Alameda Countywide Travel Demand Model was used to forecast traffic volumes for both background No Project and plus Project scenarios of all study conditions. The latest (August 2011) model is based on assumptions from the *Transportation 2035 Plan for the San Francisco Bay Area*, a regional transportation plan (RTP) published by the Metropolitan Transportation Commission (MTC), and the *Alameda Countywide Transportation Plan*, and on socio-economic forecasts from *Projections 2009*, published by the Association of Bay Area Governments (ABAG). At the time of this analysis, the most recent integrated land use and transportation plan, *Plan Bay Area*, adopted in July 2013, had not yet been incorporated into the Countywide Model. The model forecasts weekday, daily traffic and AM and PM peak hour traffic for links and intersections based on a standard 4-step travel demand model method. The model does not forecast Saturday conditions. For this reason, Saturday midday traffic was derived from the relationship between Saturday counts and weekday counts collected for baseline conditions and are referenced above in Section 4.13.1.2, Existing Conditions, of this Draft EIR, then extrapolated to the weekday model forecasts.

Baseline Conditions

Intersection and freeway analysis of Baseline plus Project conditions was performed to determine the potential traffic impacts of the proposed Project in combination with the impacts that would result from the first phase of the Kaiser Permanente San Leandro Medical Center on Marina Boulevard and the related completion of the I-880 Marina Boulevard interchange improvement project. The first phase of the Kaiser Medical Center opened in mid-2014. The interchange improvement was a requirement of the Kaiser project approval and is under construction. It is anticipated to be completed in mid-2015 in time for the opening of the Shoreline development. These improvements were included in the Baseline Conditions because both the Kaiser and the interchange projects would substantially affect the transportation network in the project area and are currently being developed; therefore, their inclusion in the baseline conditions more accurately reflects existing transportation conditions at the time when the Project opens. Analyzing existing conditions without these current but not yet complete improvements would not accurately represent existing conditions. No other planned developments or roadway improvements are assumed in the Baseline Conditions.

The Marina Boulevard interchange at I-880 would be reconfigured and be signalized at both the northbound and southbound on-ramps. The roadway improvements associated with Phase 1 of the Kaiser Permanente San Leandro Medical Center include the following:

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- A new Kaiser Permanente San Leandro Medical Center access driveway on Marina Boulevard would be provided for limited right-turn inbound and right-turn outbound access.
- Republic Avenue would be extended to the east onto the Kaiser Permanente San Leandro Medical Center campus and its intersection with Merced Street would be signalized.
- Merced Street would be restriped from the Wells Fargo driveway to Republic Avenue to provide two lanes and one Class II bike lane in each direction and two southbound left-turn lanes at the Merced Street/Republic Avenue intersection.
- Merced Street would be widened from Republic Avenue to Fairway Drive to provide two northbound lanes, two southbound lanes, a center median as well as Class II bike lanes. A northbound left-turn lane would be provided at the Republic Avenue intersection and a southbound left-turn lane would be provided at the Fairway Drive intersection.
- Fairway Drive intersections of Miller Street and Garfield Drive would be signalized (these improvements have already been completed at the time of intersection volume counts were collected; therefore, they are included in existing conditions.)
- Fairway Drive would be widened to three lanes from Merced Street to Miller Street to provide two westbound lanes and one eastbound lane. Westbound left-turn lanes would be provided at Miller Street and at Merced Street, and eastbound left-turn lane would be provided at Garfield Drive and at Miller Street.

Vehicular traffic generated by the Kaiser Permanente San Leandro Medical Center Phase 1 project was added to the existing traffic volumes to derive the background traffic for the Baseline Conditions. The Kaiser Permanente San Leandro Medical Center traffic was developed using the Countywide Model based on land use information from the *Kaiser Permanente San Leandro Medical Center/Mixed-Use Retail Development Project Draft Environmental Impact Report*.

Baseline Intersection Operations

Information regarding the weekday and Saturday midday peak hour intersection turning movement volumes and lane configurations for Baseline Conditions was used to calculate level of service and identify potential impacts at the Analysis Intersections based on the City's significance thresholds. The level of service results are summarized in Table 4.13-13, Table 4.13-14, and Table 4.13-15 and the detailed calculation worksheets are provided in Appendix H.

Signalized Intersections

Under the Baseline scenario, without the addition of Project trips, one signalized Analysis Intersection is projected to operate below the City's standard of LOS D. As seen in Table 4.13-13, the intersection of Aladdin Avenue and Alvarado Street (#28) would operate at LOS E with an average delay of 75.2 seconds. The addition of Project traffic would cause the service level to further reduce to LOS F and increase the v/c ratio by 0.02. Since the Project would only cause the v/c ratio to increase by 0.02 at the Aladdin Avenue and Alvarado Street intersection (#28), where it would already operate at substandard conditions without adding the Project traffic, the impact at this location is considered to be *less than significant* because the increase would not exceed the 0.05 threshold.

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TABLE 4.13-13 INTERSECTION LEVEL OF SERVICE – BASELINE CONDITIONS – AM PEAK HOUR

No	Street	Street	Control	Baseline		Baseline + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
1	Doolittle Dr (SR 61)	Davis St (SR 112)	Sig	26.6	C	26.8	C		26.8	C
2	Phillips Ln	Davis St (SR 112)	Sig	20.0	B	20.0	C		20.0	C
3	Warden Av-Timothy Dr	Davis St (SR 112)	Sig	19.7	B	19.7	B		19.7	B
4	I-880 Southbound ramps	Davis St (SR 112)	Sig	12.8	B	12.8	B		12.8	B
5	I-880 Northbound ramps	Davis St (SR 112)	Sig	13.7	B	13.6	B		13.6	B
6	Doolittle Dr	Williams St	Sig	19.7	B	21.0	C		21.0	C
7	Westgate Pkwy	Williams St	Sig	15.6	B	15.8	B		15.8	B
8	Merced St	Williams St	Sig	35.1	D	34.6	C		34.6	C
9	Neptune Dr	Marina Blvd	TWSC	1.4 (9.7)	A (A)	0.7 (18.3)	A (C)		0.7 (18.7)	A (C)
10	Aurora Dr	Marina Blvd	AWSC	9.7	A	76.1	F		9.0/10.4	A/B
11	Doolittle Dr	Marina Blvd	Sig	34.6	C	75.7	E		46.1	D
12	Merced St	Marina Blvd	Sig	35.4	D	44.9	D		44.9	D
13	Kaiser driveway	Marina Blvd	TWSC	0.1 (8.7)	A (A)	0.1 (8.8)	A (A)		0.1 (8.8)	A (A)
14	I-880 Southbound ramps	Marina Blvd	Sig	18.9	B	18.9	B		18.9	B
15	I-880 Northbound ramps	Marina Blvd	Sig	17.1	B	18.2	B		18.2	B
16	Wayne Av-Teagarden St	Marina Blvd	Sig	25.3	C	25.2	C		25.2	C
17	Alvarado St	Marina Blvd	Sig	26.3	C	26.1	C		26.1	C
18	San Leandro Blvd	Marina Blvd	Sig	44.7	D	54.8	D		54.8	D
19	Monarch Bay Dr	Mulford Point Dr	AWSC	7.6	A	17.8	C		7.3	A
20	Monarch Bay Dr	Pescador Pt Dr	AWSC	7.5	A	8.4	A		8.4	A
21	Monarch Bay Dr	Fairway Dr	AWSC	7.9	A	8.8	A		8.8	A
22	Aurora Dr	Fairway Dr	AWSC	8.3	A	10.0	A		10.0	A
23	Doolittle Dr	Fairway Dr	Sig	16.8	B	18.5	B		18.5	B
24	Merced St	Fairway Dr	Sig	32.4	C	33.2	C		33.2	C
25	Garfield Rd	Fairway Dr	Sig	10.1	B	13.2	B		13.2	B
26	Miller St	Fairway Dr	Sig	13.6	B	13.8	B		13.8	B
27	Aladdin Av	Teagarden St	Sig	18.9	B	19.8	B		19.8	B
28	Aladdin Av	Alvarado St	Sig	75.2	E	84.3	F	0.02	84.3	F
29	Merced St	Wells Fargo Driveway	Sig	2.2	A	2.2	A		2.2	A
30	Merced St	Republic Av	Sig	19.0	B	19.1	B		19.1	B
31	Merced St	West Av 140th	Sig	2.3	A	2.3	A		2.3	A

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TABLE 4.13-13 INTERSECTION LEVEL OF SERVICE – BASELINE CONDITIONS – AM PEAK HOUR

No	Street	Street	Control	Baseline		Baseline + Project		Change	After Mitigation	
				Delay	LOS	Delay	LOS	v/c or Delay	Delay	LOS
Notes: Sig = Signalized; TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach.										
Change in v/c or delay is shown when relevant to significance determination										
Bold font indicates substandard operations										
Shaded cells indicate significant impact										
* The mitigated results of both roundabout/signalization are shown for the Aurora Drive/Marina Boulevard intersection.										
Source: Kittelson & Associates, 2014.										

The Project traffic would cause two other signalized intersections to reduce to unacceptable levels where the intersections would operate at LOS D or better without the Project. The Doolittle Drive and Marina Boulevard intersection (#11) would reduce to LOS E during AM and PM peak hours; while the San Leandro Boulevard and Marina Boulevard intersection (#18) would reduce to LOS E in the PM peak hour.

Since the Project would cause the intersection level of service to reduce from LOS C to LOS E in the AM and PM peak hours at the intersection of Doolittle Drive and Marina Boulevard (#11), in the absence of adequate mitigation a *significant* impact would result.

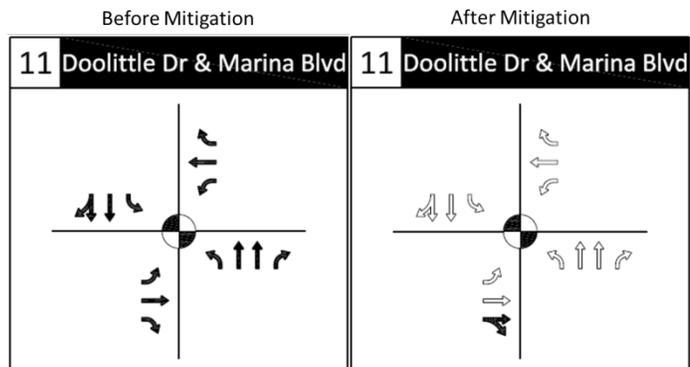
Impact TRAF-1A: The proposed Project would contribute to unacceptable operation (from LOS C to LOS E in the AM and PM peak hours) at the intersection of Doolittle Drive and Marina Boulevard (#11) under baseline Plus Project conditions.

Mitigation Measure TRAF-1A.1: Convert the existing eastbound right-turn lane on Marina Boulevard to a shared through-right turn lane to provide one left-turn lane, one through lane and one shared through-right turn lane on the eastbound approach.

Mitigation Measure TRAF-1A.2: Optimize the cycle length of the traffic signal at the intersection of Doolittle Drive and Marina Boulevard (#11). The traffic signal does not operate in coordination with any other signal; therefore, the cycle length can be adjusted without affecting other signals in the system.

Significance After Mitigation: Less than significant. Implementation of Mitigation Measures TRAF-1A.1 and TRAF-1A.2 would improve the operation of this intersection to LOS D during the AM and PM peak hours and lessen the Project impacts to *less than significant*.

The lane geometries before and after these mitigation measures are graphically shown in the figures right. In the “after” figure, the mitigation measure is shown in solid black while lanes not being changed are shown in gray-scale.



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TABLE 4.13-14 INTERSECTION LEVEL OF SERVICE – BASELINE CONDITIONS – PM PEAK HOUR

No	Street	Street	Control	Baseline		Baseline + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
1	Doolittle Dr (SR 61)	Davis St (SR 112)	Sig	20.2	C	21.5	C		21.5	C
2	Phillips Ln	Davis St (SR 112)	Sig	31.0	C	31.6	C		31.6	C
3	Warden Av-Timothy Dr	Davis St (SR 112)	Sig	30.7	C	30.6	C		30.6	C
4	I-880 Southbound ramps	Davis St (SR 112)	Sig	12.6	B	12.9	B		12.9	B
5	I-880 Northbound ramps	Davis St (SR 112)	Sig	16.9	B	16.8	B		16.8	B
6	Doolittle Dr	Williams St	Sig	16.7	B	18.2	B		18.2	B
7	Westgate Pkwy	Williams St	Sig	26.0	C	26.1	C		26.1	C
8	Merced St	Williams St	Sig	28.0	C	28.1	C		28.1	C
9	Neptune Dr	Marina Blvd	TWSC	0.5(11.2)	A(B)	0.4(23.3)	A(C)		0.4 (23.3)	A (C)
10	Aurora Dr*	Marina Blvd	AWSC	10.1	B	70.8	F		8.6/7.8	A/A
11	Doolittle Dr	Marina Blvd	Sig	34.9	C	62.5	E		50.0	D
12	Merced St	Marina Blvd	Sig	38.5	D	43.4	D		43.4	D
13	Kaiser driveway	Marina Blvd	TWSC	0.1 (8.8)	A(A)	0.1(9.2)	A(A)		0.1 (9.2)	A (A)
14	I-880 Southbound ramps	Marina Blvd	Sig	21.7	C	22.6	C		22.6	C
15	I-880 Northbound ramps	Marina Blvd	Sig	27.0	C	28.1	C		28.1	C
16	Wayne Av-Teagarden St	Marina Blvd	Sig	32.4	C	32.8	C		32.8	C
17	Alvarado St	Marina Blvd	Sig	22.0	C	21.7	C		21.9	C
18	San Leandro Blvd	Marina Blvd	Sig	50.1	D	58.1	E		44.9	D
19	Monarch Bay Dr	Mulford Point Dr	AWSC	8.4	A	52.4	F		8.1	A
20	Monarch Bay Dr	Pescador Pt Dr	AWSC	7.7	A	8.8	A		8.8	A
21	Monarch Bay Dr	Fairway Dr	AWSC	9.1	A	10.4	B		10.4	B
22	Aurora Dr	Fairway Dr	AWSC	8.6	A	10.4	B		10.4	B
23	Doolittle Dr	Fairway Dr	Sig	16.2	B	18.1	B		18.1	B
24	Merced St	Fairway Dr	Sig	33.2	C	33.5	C		33.5	C
25	Garfield Rd	Fairway Dr	Sig	9.9	A	11.5	B		11.5	B
26	Miller St	Fairway Dr	Sig	19.8	B	20.0	C		20.0	C
27	Aladdin Av	Teagarden St	Sig	17.4	B	17.6	B		17.6	B
28	Aladdin Av	Alvarado St	Sig	26.6	C	26.6	C		26.6	C
29	Merced St	Wells Fargo driveway	Sig	3.8	A	3.8	A		3.8	A
30	Merced St	Republic Av	Sig	20.2	C	20.1	C		20.1	C
31	Merced St	West Av 140th	Sig	3.4	A	3.4	A		3.4	A

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TABLE 4.13-14 INTERSECTION LEVEL OF SERVICE – BASELINE CONDITIONS – PM PEAK HOUR

No	Street	Street	Control	Baseline		Baseline + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
Notes: Sig = Signalized; TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach.										
Change in v/c or delay is shown when relevant to significance determination										
Bold font indicates substandard operations										
Shaded cell indicates significant impact										
* The mitigated results of both roundabout/signalization are shown for the Aurora Drive/Marina Boulevard intersection.										
Source: Kittelson & Associates, 2014.										

TABLE 4.13-15 INTERSECTION LEVEL OF SERVICE – BASELINE CONDITIONS – SATURDAY MIDDAY PEAK HOUR

No	Street	Street	Control	Baseline		Baseline + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
1	Doolittle Dr (SR 61)	Davis St (SR 112)	Sig	18.6	B	18.5	B		18.5	B
10	Aurora Dr*	Marina Blvd	AWSC	9.9	A	32.1	D		7.0/7.7	A/A
11	Doolittle Dr	Marina Blvd	Sig	30.4	C	40.6	D		39.8	D
12	Merced St	Marina Blvd	Sig	36.6	D	37.6	D		37.6	D
13	Kaiser driveway	Marina Blvd	TWSC	0.1 (8.7)	A (A)	0.1 (8.8)	A (A)		0.1 (8.8)	A (A)
14	I-880 Southbound ramps	Marina Blvd	Sig	20.6	C	20.8	C		20.8	C
15	I-880 Northbound ramps	Marina Blvd	Sig	15.6	B	16.1	B		16.1	B
22	Aurora Dr	Fairway Dr	AWSC	8.1	A	9.9	A		9.9	A
23	Doolittle Dr	Fairway Dr	Sig	15.5	B	15.9	B		15.9	B
24	Merced St	Fairway Dr	Sig	29.1	C	30.8	C		30.8	C
Notes: Sig = Signalized; TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach.										
Change in v/c or delay is shown when relevant to significance determination										
* The mitigated results of both roundabout/signalization are shown for the Aurora Drive/Marina Boulevard intersection.										
Source: Kittelson & Associates, 2014.										

As discussed above, the addition of traffic associated with implementation of the proposed Project would cause the intersection level of service to reduce from LOS D to LOS E in the PM peak hour at the intersection of San Leandro Boulevard and Marina Boulevard (#18). Therefore, this impact is considered to be *significant* in the absence of adequate mitigation.

Impact TRAF-1B: The proposed Project would contribute to unacceptable operation (from LOS D to LOS E in the PM peak hour) at the intersection of San Leandro Boulevard and Marina Boulevard (#18) under baseline Plus Project conditions.

Mitigation Measure TRAF-1B: Optimize the traffic signal timing splits at the intersection of San Leandro Boulevard and Marina Boulevard (#18).

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Significance After Mitigation: Less than significant. Implementation of this Mitigation Measure would improve the operation of this intersection to LOS D and lessen this impact to a *less-than-significant* level during the PM peak hour.

Unsignalized Intersections

All unsignalized intersections are projected to operate within acceptable standards under the Baseline No Project scenario. The addition of Project traffic would cause two all-way stop controlled intersections to reduce to unacceptable levels whereas they would operate at LOS B or better without the Project. The Aurora Drive and Marina Boulevard intersection (#10) would reduce to LOS F during AM and PM peak hours; while the Monarch Bay Drive and Mulford Point Drive intersection (#19) within the Project site would reduce to LOS F in the PM peak hour.

As discussed above, the addition of traffic associated with implementation of the proposed Project would cause the level of service at the intersection of Aurora Drive and Marina Boulevard (#10) to reduce from LOS A to LOS F in the AM and from LOS B to LOS F in the PM peak hour. In the absence of adequate mitigation, this impact is considered to be *significant*.

Impact TRAF-1C: The proposed Project would contribute to unacceptable operation (from LOS A to LOS F in the AM and from LOS B to LOS F in the PM peak hour) at the intersection of Aurora Drive and Marina Boulevard (#10) under baseline Plus Project conditions.

Mitigation Measure TRAF-1C: Install a modern mini-roundabout that could be accommodated within the existing right-of-way.¹² Research has shown that roundabout-controlled intersections have similar low frequency and severity of crashes as all-way stop-controlled intersections. Further, the slower speed at roundabout also reduces the risk of injuries and fatalities for road users in the event of a crash. A conceptual drawing of a mini-roundabout is provided in Figure 4.13-5. Implementation of this mitigation measure would improve the operation of this intersection to LOS A in the AM, PM and Saturday midday peak hours. Alternatively, installation of a traffic signal would also mitigate the project impact as peak hour signal warrant is met. Upon implementation, the intersection would improve to LOS B in the AM peak hour and LOS A in the PM peak hour and Saturday midday peak hour.

Significance After Mitigation: Less than significant. Implementation of this Mitigation Measure would improve the operation to LOS A in the AM and PM peak hours as well as the Saturday peak hour. This would reduce this impact to a *less-than-significant* level during the PM peak hour.

The addition of traffic associated with implementation of the proposed Project would cause the level of service at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) to reduce from LOS A to LOS F in the PM peak hour. In the absence of adequate mitigation, this would result in a *significant* impact.

¹² Roundabout analysis was performed using Sidra software based on HCM 2010 methodology with Caltrans adjustments.

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Impact TRAF-1D: The proposed Project would contribute to unacceptable operation (from LOS A to LOS F in the PM peak hour) at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) under baseline Plus Project conditions.

Mitigation Measure TRAF-1D: Install a roundabout at the intersection of Monarch Bay Drive and Mulford Point Drive (#19).¹³

Significance After Mitigation: Less than significant. Implementation of this measure would improve the operation to LOS A and lessen the Project impacts to *less than significant* during the PM peak hour.

Baseline Freeway Operations

Weekday peak hour freeway operations are shown in Table 4.13-16 and detailed calculation worksheets are provided in Appendix H. As seen in Table 4.13-16, the results indicate that the mainline segment of I-880 northbound between Marina Boulevard and Davis Street would operate at LOS E during the AM peak hour under Baseline Conditions. The Project would add traffic volumes equivalent to only 0.1 percent of the freeway segment's design capacity. The Project impact is considered to be *less than significant* because the increase would not exceed the greater than 1% threshold. All other freeway segments would operate at LOS D or better and therefore no mitigation is necessary.

TRAF-2	The proposed Project would conflict with an applicable congestion management program, including, but not limited to, level of service standards, travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
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According to the Alameda County Congestion Management Program (CMP), the level of service standard for Metropolitan Transportation System (MTS) roadways, which include the CMP roadway network, is LOS E, except for those locations that were at LOS F in 1991. The MTS roadway facilities in the Project area include I-880, Davis Street, and Doolittle Drive. Significant traffic impacts on MTS roadways in the study area are identified if the Project causes:

- The operations on MTS roadways to deteriorate from LOS E or better to LOS F with the exception of southbound I-880 between Hegenberger Road and Washington Avenue, where the standard is LOS F; or
- An increase in the v/c ratio on an MTS roadway already operating at LOS F by more than 0.03.

These standards have been included to address impacts along roadway segments currently operating under unacceptable levels and were developed based on professional judgment using a "reasonableness test" of daily fluctuations of traffic. In addition, a change in the v/c ratio of more than 0.03 has been found to be the threshold for which a perceived change in congestion is observed. This change is equivalent to about one-half of the change from one level of service to the next.

¹³ Roundabout analysis was performed using Sidra software based on HCM 2010 methodology with Caltrans adjustments.

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TABLE 4.13-16 FREeway LEVEL OF SERVICE – BASELINE CONDITIONS – AM AND PM PEAK HOUR

Location	Type	Baseline			Baseline + Project		
		Volume ^a	Density ^b	LOS ^c	Volume ^a	Density ^b	LOS ^c
AM PEAK HOUR							
I-880 Northbound							
Washington Av. to Marina Blvd.	Mainline	7,989	28.2	D	8,169	29.0	D
Marina Blvd. to Davis St.	Mainline	8,399	36.6	E	8,408	36.7	E
	Weave ^d	1,605	N/A	C	1,614	N/A	C
Davis St. to 98th Av.	Mainline	6,186	27.0	D	6,204	27.1	D
I-880 Southbound							
98th Av. to Davis St	Mainline	5,810	25.1	C	5,932	25.7	C
Davis St. to Marina Blvd.	Mainline	6,616	26.3	C	6,626	26.4	C
	Weave ^d	1,196	N/A	A	1,205	N/A	A
Marina Blvd. to Washington Av.	Mainline	6,218	21.3	C	6,289	21.5	C
PM PEAK HOUR							
I-880 Northbound							
Washington Av. to Marina Blvd.	Mainline	7,241	25.0	C	7,323	25.3	C
Marina Blvd. to Davis St.	Mainline	7,644	34.7	D	7,657	34.9	D
	Weave ^d	2,168	N/A	C	2,181	N/A	C
Davis St. to 98th Av.	Mainline	5,864	25.4	C	5,896	25.5	C
I-880 Southbound							
98th Av. to Davis St	Mainline	6,418	28.4	D	6,452	28.5	D
Davis St. to Marina Blvd.	Mainline	7,941	34.3	D	7,654	34.5	D
	Weave ^d	1,699	N/A	B	1,711	N/A	B
Marina Blvd. to Washington Av.	Mainline	7,692	26.9	D	7,866	27.6	D

a. Volume = vehicles per hour (vph)

b. Density = passenger car per mile per lane (pc/m/ln)

c. LOS = Level of Service

d. Marina Blvd. to Davis St. analyzed as a weaving section using the Leisch Method as described in the Caltrans Design Manual, May 7, 2012. The volume show for this segment is the weaving volume.

Regarding public transportation facilities, the CMP requires consideration of the Project’s impact on MTS transit operators and riders. For the purpose of this study, significant transit impacts are identified if the Project causes:

- Congestion that degrades transit vehicle operations; or
- Ridership to exceed existing transit capacity; or

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- Contribution of at least three percent of the total trips when the capacity is already exceeded under No Project conditions; or
- Inadequate pedestrian connections between the Project site and transit stops.

Congestion Management Program

Congestion Management Program Land Use Analysis was performed to identify any potential impacts of the Project on the Metropolitan Transportation System (MTS) roadway network and the MTS transit operators. The potential impacts of the Project to bicyclists and pedestrians are discussed under the later Pedestrian Impacts and Bicycle Impacts sections under Impact TRAF-6. MTS roadways in the study area include I-880, Doolittle Drive, and Davis Street.

Vehicle impacts were assessed at selected roadway locations, including three segments of I-880 and two arterial segments on Doolittle Drive and on Davis Street. Transit impacts were addressed for AC Transit bus routes servicing the Project study area (Line 89) and other nearby routes (Lines S and 75). The BART system was also investigated for impacts to the San Leandro BART station.

MTS Roadway Segments

Traffic forecasts for 2020 and 2035 conditions were extracted from the most current version of the Countywide Model (dated August 2011) at the selected MTS roadway segments. The Countywide Model specifies forecasts for 2020 and 2035 as horizon years. The forecasts differ from those applied to the Circulation System Performance analysis discussed above under impact TRAF-1, in that no adjustments or changes were made to the Model in accordance with CMP guidelines. Consequently, the CMP analysis results do not account for land use developments or roadway improvements not already in the model. The **Plus Project** forecasts for roadway segments were derived by manually adding the Project-generated traffic developed for the Circulation System Performance analysis to the No Project forecasts.

The level of service results along with peak hour volumes and density on the freeway analysis segments for 2020 and 2035 with and without Project conditions are provided in Table 4.13-17 and Table 4.13-18 and on the MTS arterial segments in Table 4.13-19 and Table 4.13-20.

MTS Freeway Segments

The 2020 results indicate that the I-880 northbound segments north of Marina Boulevard and north of Davis Street would operate at LOS F before the addition of Project traffic in the AM peak hour. However, the Project would not cause v/c ratios to increase by more than 0.03. In the PM peak hour, the northbound segment of I-880, north of Davis Street, would reduce from LOS E to LOS F when Project traffic is added, which would be a significant effect. Under 2035 conditions, the two I-880 northbound segments north of Marina Boulevard and north of Davis Street are projected to be at LOS F before the addition of Project traffic in both the AM and PM peak hours. However, the Project would not cause the v/c ratios to increase by more than 0.03. Similarly, the southbound segment of I-880, north of Marina Boulevard, would also operate at LOS F without the Project. While the Project would add traffic to this segment, the v/c ratio would not increase by more than 0.03.

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TABLE 4.13-17 METROPOLITAN TRANSPORTATION SYSTEM FREEWAY LEVEL OF SERVICE RESULTS FOR 2020

Location	Type	No Project			Plus Project			Change in v/c > 3%?	Significant?
		Volume ^a	Density ^b	LOS ^c	Volume ^a	Density ^b	LOS ^c		
2020 AM PEAK HOUR									
I-880 Northbound									
South of Marina Boulevard	Basic	9,234	34.8	D	9,383	35.8	E	No	No
North of Marina Boulevard	Weave	9,282	v/c >1 ^d	F	9,288	v/c >1 ^d	F	No	No
North of Davis Street	Basic	8,862	50.3	F	8,908	51.0	F	No	No
I-880 Southbound									
North of Davis Street	Basic	8,106	28.7	D	8,242	29.4	D	No	No
North of Marina Boulevard	Weave	8,190	39.4	E	8,329	40.9	E	No	No
South of Marina Boulevard	Basic	7,420	25.7	C	7,493	26.0	D	No	No
2020 PM PEAK HOUR									
I-880 Northbound									
South of Marina Boulevard	Basic	8,716	31.8	D	8,777	32.1	D	No	No
North of Marina Boulevard	Weave	8,968	46.2	E	9,005	46.7	E	No	No
North of Davis Street	Basic	8,399	44.3	E	8,470	45.2	F	No	Yes
I-880 Southbound									
I-880 North of Davis Street	Basic	9,488	36.5	E	9,551	36.9	E	No	No
North of Marina Boulevard	Weave	9,630	49.9	E	9,665	50.4	E	No	No
South of Marina Boulevard	Basic	9,528	36.7	E	9,673	37.7	E	No	No

Note: **Bold** font indicates exceedance of standard.

a. Volume = vehicles per hour (vph).

b. Density = passenger car per mile per lane (pc/m/ln).

c. LOS = Level of Service.

d. Volume exceeds weaving segment capacity.

Source: Kittelson & Associates, Inc., 2014.

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TABLE 4.13-18 METROPOLITAN TRANSPORTATION SYSTEM FREEWAY LEVEL OF SERVICE RESULTS FOR 2035

Location	Type	No Project			Plus Project			Change in v/c > 3%?	Significant?
		Volume ^a	Density ^b	LOS ^c	Volume ^a	Density ^b	LOS ^c		
2035 AM PEAK HOUR									
I-880 Northbound									
South of Marina Boulevard	Basic	9,880	39.2	E	10,031	40.4	E	No	No
North of Marina Boulevard	Weave	9,654	v/c > 1 ^d	F	9,662	v/c > 1 ^d	F	No	No
North of Davis Street	Basic	9,598	63.2	F	9,651	64.3	F	No	No
I-880 Southbound									
North of Davis Street	Basic	9,019	33.5	D	9,167	34.4	D	No	No
North of Marina Boulevard	Weave	9,338	48.1	E	9,477	49.9	E	No	No
South of Marina Boulevard	Basic	8,755	32.0	D	8,819	32.4	D	No	No
2035 PM PEAK HOUR									
I-880 Northbound									
South of Marina Boulevard	Basic	9,764	38.4	E	9,810	38.7	E	No	No
North of Marina Boulevard	Weave	9,860	v/c > 1 ^d	F	9,905	v/c > 1 ^d	F	No	No
North of Davis Street	Basic	9,889	70.0	F	9,982	72.6	F	No	No
I-880 Southbound									
I-880 North of Davis Street	Basic	10,199	41.8	E	10,277	42.4	E	No	No
North of Marina Boulevard	Weave	10,276	v/c > 1 ^d	F	10,346	v/c > 1 ^d	F	No	No
South of Marina Boulevard	Basic	10,121	41.1	E	10,263	42.3	E	No	No

Note: **Bold** font indicates exceedance of standard.

a. Volume = vehicles per hour (vph).

b. Density = passenger car per mile per lane (pc/m/ln).

c. LOS = Level of Service.

d. Volume exceeds weaving segment capacity.

Source: Kittelson & Associates, Inc., 2014.

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TABLE 4.13-19 METROPOLITAN TRANSPORTATION SYSTEM ARTERIAL LEVEL OF SERVICE RESULTS FOR 2020

Segment	2020 No-Project Volume	2020 Plus Project Volume	Change in v/c Ratio	Change in Volume	2020 No-Project LOS	2020 Plus Project LOS	Change in v/c >0.03?	Significant Impact?
NORTHBOUND/ EASTBOUND								
AM Peak Hour								
Doolittle Drive North of Davis Street	2,282	2,325	0.02	43 (1.9%)	F	F	No	No
Davis Street East of Doolittle Drive	810	853	0.03	43 (5.3%)	C	C	No	No
PM Peak Hour								
Doolittle Drive North of Davis Street	2,126	2,230	0.06	104 (4.9%)	F	F	Yes	Yes
Davis Street East of Doolittle Drive	1,930	1,973	0.03	43 (2.2%)	F	F	No	No
SOUTHBOUND/WESTBOUND								
AM Peak Hour								
Doolittle Drive North of Davis Street	722	792	0.04	70 (9.7%)	C	C	Yes	No
Davis Street East of Doolittle Drive	1,975	1,978	0.00	3 (0.2%)	F	F	No	No
PM Peak Hour								
Doolittle Drive North of Davis Street	2,152	2,213	0.03	61 (2.8%)	F	F	No	No
Davis Street East of Doolittle Drive	1,754	1,787	0.02	33 (1.9%)	F	F	No	No

Note: **Bold** font indicates exceedance of standard.

Shaded cells indicates significant impact.

Volume Source: Alameda CTC Countywide Model, Kittelson & Associates, Inc., 2014.

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TABLE 4.13-20 METROPOLITAN TRANSPORTATION SYSTEM ARTERIAL LEVEL OF SERVICE RESULTS FOR 2035

Segment	2035 No-Project Volume	2035 Plus Project Volume	Change in v/c Ratio	Change in Volume	2035 No-Project LOS	2035 Plus Project LOS	Change in v/c >0.03?	Significant Impact?
NORTHBOUND/ EASTBOUND								
AM Peak Hour								
Doolittle Drive North of Davis Street	2,828	2,866	0.02	38 (1.3%)	F	F	No	No
Davis Street East of Doolittle Drive	1,085	1,134	0.03	49 (4.5%)	D	D	No	No
PM Peak Hour								
Doolittle Drive North of Davis Street	2,310	2,381	0.04	71 (3.1%)	F	F	Yes	Yes
Davis Street East of Doolittle Drive	2,015	2,073	0.03	58 (2.9%)	F	F	No	No
SOUTHBOUND/WESTBOUND								
AM Peak Hour								
Doolittle Drive North of Davis Street	963	1,017	0.03	54 (5.6%)	C	C	No	No
Davis Street East of Doolittle Drive	1,974	1,989	0.01	15 (0.8%)	F	F	No	No
PM Peak Hour								
Doolittle Drive North of Davis Street	2,552	2,595	0.02	43 (1.7%)	F	F	No	No
Davis Street East of Doolittle Drive	1,999	2,014	0.01	15 (0.8%)	F	F	No	No

Note: **Bold** font indicates exceedance of standard.

Shaded cells indicates significant impact.

Volume Source: Alameda CTC Countywide Model, Kittelson & Associates, Inc., 2014.

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As discussed above, the addition of traffic associated with implementation of the proposed Project would cause the I-880 northbound segment north of Davis Street to deteriorate from LOS E to LOS F in the PM peak hour, under Year 2020 conditions. In the absence of adequate mitigation, this would result in a *significant* impact.

Impact TRAF-2A: The proposed Project would cause the I-880 northbound segment north of Davis Street to reduce from LOS E to LOS F in the PM peak hour under Year 2020 conditions

Mitigation Measure TRAF-2A: One of the following measures shall occur:

- Widen I-880 to provide an additional travel lane in the northbound direction; or
- Develop and implement a Transportation Demand Management (TDM) plan that would discourage single occupant vehicle trips. TDM measures may include:
 - Provide a shuttle service that operates between the Project site and key locations such as San Leandro and Coliseum BART stations and Oakland International Airport;
 - Facilitate carpool and ridesharing among residents of the Project.

Significance After Mitigation: Significant and unavoidable. Implementation of one of the measures under Mitigation Measure TRAF-2 may mitigate this impact to a less-than-significant level. However, the project impact would remain *significant and unavoidable* because of the following reasons:

- Widening I-880 is not considered to be feasible due to cost and freeway right of way constraints as a result of being within Caltrans right-of-way and would be beyond the control of the City; and
- The effectiveness of TDM measures in reducing the number of Project trips cannot be adequately quantified to ensure project impacts would be fully mitigated.

The on-going I-880 Integrated Corridor Management effort led by the Metropolitan Transportation Commission that aims to optimize freeway, arterial signal, rail, and bus systems, and incorporate Intelligent Transportation System would also help enhance efficiency on the freeway.

MTS Arterial Segments

The MTS arterial segment analysis results are similar for both 2020 and 2035. The same segments are projected to operate at LOS F with and without the addition of Project traffic. The northbound Doolittle Drive segment north of Davis Street would be at LOS F before the addition of Project traffic in both AM and PM peak hours. The Project would cause the v/c ratios to increase by more than the 0.03 threshold in the PM peak hour. The southbound Doolittle Drive segment north of Davis Street would also be at LOS F in the PM peak hour; but the increase in v/c ratio resulting from the Project traffic would be less than 0.03. The Davis Street segment east of Doolittle Drive would operate at LOS F in both the eastbound and westbound directions in the PM peak hour, and in the westbound direction in the AM peak hour under both 2020 and 2035 conditions. However, the Project would not cause the v/c ratios to increase by more than 0.03 in either peak periods. Since the Project would cause v/c ratios to increase by more than 0.03 in the PM peak hour, in the absence of adequate mitigation, a significant impact would result.

As discussed above, the addition of traffic associated with implementation of the proposed Project would cause the v/c ratio on the northbound segment of Doolittle Drive, which would operate at LOS F, to

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increase by 0.06 under Year 2020 conditions and by 0.04 under Year 2035 conditions in the PM peak hour. In the absence of adequate mitigation, this would result in a *significant* impact.

Impact TRAF-2B: The proposed Project would cause the volume-to-capacity (v/c) ratio on the northbound segment of Doolittle Drive, which would operate at Level of Service (LOS) F, to increase by 0.06 under Year 2020 conditions and by 0.04 under Year 2035 conditions in the PM peak hour.

Mitigation Measure TRAF-2B.1: Widen Doolittle Drive to provide an additional travel lane in the northbound direction; or

Mitigation Measure TRAF-2B.2: Provide a shuttle service that operates between the Project site and key locations such as San Leandro and Coliseum BART stations and Oakland International Airport.

Significance After Mitigation: Significant and unavoidable. Widening Doolittle Drive to provide an additional travel lane in the northbound direction would improve the level of service to LOS C in Year 2020 and LOS D in Year 2035 and would mitigate the Project impact to less than significant. However, the feasibility of this measure is uncertain due to right of way constraints along this mostly developed corridor. Alternatively, provision of a shuttle service that operates between the Project site and key locations, such as San Leandro and Coliseum BART stations and Oakland International Airport, during the PM peak hour would likely lessen the Project's impact on the freeway segment. However, the effectiveness of the shuttle service in reducing the number of Project trips on Doolittle Drive cannot be adequately quantified. As discussed above, the on-going I-880 Integrated Corridor Management effort led by the Metropolitan Transportation Commission that aims to optimize freeway, arterial signal, rail, and bus systems and incorporate Intelligent Transportation System would also help enhance efficiency on the freeway. However, for the reasons listed above this impact would remain *significant and unavoidable*.

MTS Transit Operations

The two primary transit agencies serving the Project area are AC Transit and BART. AC Transit lines S, 75, and 89 provide bus service in the study area; while the San Leandro BART station is the closest to the Project site. AC Transit line 89 provides direct access to the Project site, connecting the site to the San Leandro BART station. According to the Bay Area Travel Survey 2000 (BATS2000) mode shares by trip purpose and proximity to rail and ferries table,¹⁴ the Project is expected to generate a 2.7 percent rail and ferry mode share and a 2.4 percent bus mode share. The associated number of trips are detailed in Table 4.13-21.

¹⁴ Alameda County Transportation Commission, October 2013, Congestion Management Program. Appendix L.

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TABLE 4.13-21 MODE SPLIT FOR TOTAL TRIPS GENERATED BY A PROJECT MORE THAN 1 MILE FROM A BART STATION WITH A HIGH SUBURBAN DENSITY

Mode	Percentage	Weekday	AM Peak Hour			PM Peak Hour			Saturday		
			In	Out	Total	In	Out	Total	In	Out	Total
In-Vehicle Person	82.0%	7,177	570	284	853	339	531	869	427	279	705
Rail & Ferry	2.7%	236	19	9	28	11	17	29	14	9	23
Bus	2.4%	210	17	8	25	10	16	25	13	8	21
Bicycle	1.1%	96	8	4	11	5	7	12	6	4	9
Pedestrian	10.7%	936	74	37	111	44	69	113	56	36	92
Other	1.2%	105	8	4	12	5	8	13	6	4	10

Source: Kittelson & Associates, 2014.

Effects of Vehicle Traffic on Mixed Flow Transit Operations

An assessment was made to determine if vehicle trips generated by the Project would cause congestion that reduces transit vehicle operations. AC Transit currently operates three lines in the area which include S, 75, and 89. The S line is a transbay service providing service between Eden Shores Park in Hayward and the Transbay Terminal in San Francisco. Both lines 75 and 89 provide circulator routes that stop at both the San Leandro and Bay Fair BART stations.

AC Transit Line S departs I-880 at the Marina Boulevard interchange and proceeds down Merced Street. The Project is not expected to significantly increase the number of vehicles or delay on Merced Street. However, the Project would affect transit operations on this line near the I-880 Marina interchange due to the increase in vehicle volume resulting from the proposed Project. The increased number of vehicles would cause an increase in delay for transit vehicles. The proposed mitigation measure for the Marina Boulevard and I-880 southbound off ramp (#14) identified under both **Near-Term Cumulative** and **Long-Term Cumulative** sections in the Circulation System Performance analysis would eliminate this delay, resulting in little, if any, impact on Line S.

Line 75 runs a similar route as Line S near the Project site using Merced Street to travel south. Merced Street is not anticipated to be impacted by the project since there are no geometric changes; however, Line 75 does use the Marina Boulevard and Merced Street intersection (#12). Project traffic traveling through this intersection on Marina Boulevard may increase the delay of Line 75 at this intersection.

Of the three transit lines near the proposed Project, Line 89 is expected to be most affected by the proposed Project. Line 89 uses Davis Street and Williams Street when heading towards and away from the San Leandro BART station. While these two streets are not expected to be greatly affected by the Project, Line 89 uses the Marina Boulevard and Aurora Drive (#10) intersection as well as routing along Monarch Bay Drive through the Mulford Point Drive (#19) intersection. Additionally, most of the Project trips would pass through one or both of these two intersections and thereby would potentially impact the transit operations of Line 89.

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As discussed above, the Project would cause increases in delays at the Aurora Drive and Marina Boulevard (#10), Marina Boulevard and Merced Street (#12), Marina Boulevard and I-880 southbound off ramp (#14), and Monarch Bay Drive and Mulford Point Drive (#19) intersections, which would adversely impact the transit operations of AC Transit Lines S, 75 and 89. In the absence of adequate mitigation this would result in a *significant* impact to transit operators.

Impact TRAF-2C: The proposed Project would cause increases in delays at the Aurora Drive and Marina Boulevard (#10), Marina Boulevard and Merced Street (#12), Marina Boulevard and I-880 southbound off ramp (#14), and Monarch Bay Drive and Mulford Point Drive (#19) intersections, which would adversely impact the transit operations of AC Transit Line S, 75 and 89.

Mitigation Measure TRAF-2C: Implement Mitigation Measures TRAF-1A through TRAF-7F. Any roundabouts shall be designed to accommodate AC Transit busses.

Significance After Mitigation: Less than significant. Implementation of Mitigation Measure TRAF-2C would reduce impacts to transit operations to a *less-than-significant* level by improving transit travel times through the intersections impacted by the proposed Project.

Transit Capacity

In addition to the impact of vehicles on transit operations, the CMP guidelines require a determination for whether a proposed Project would cause the existing transit service to exceed its available capacity. Both BART and the three AC Transit lines were considered for these purposes. The San Leandro BART station is located approximately three miles northeast of the Project site. As shown in Table 4.13-21, the Project is expected to generate 236 weekday BART trips with 28 occurring in the AM peak hour and 29 in the PM peak hour. The Project is also expected to generate approximately 23 trips during the Saturday peak hour. Table 4.13-22 shows the distribution of Project trips for each peak hour on BART. The Project is likely to contribute between 2 and 5 additional passengers per train, which would not exceed BART's capacity.

TABLE 4.13-22 BART PEAK HOUR PROJECT TRIPS

Peak Hour	Project Trips	BART Trains	Additional Passengers/Train
AM	28	12	2.3
PM	29	12	2.4
SAT	23	6	3.8

Source: Kittelson & Associates, 2014.

The Project is estimated to generate 210 bus trips per day with approximately 25 occurring in the AM and PM peak hours with 21 during the Saturday peak hour. Line 75 currently operates one bus per hour while Lines S and 89 operate two busses per hour during the weekday peak hours. Line 89 is the only line operating on Saturday, and is on a one bus per hour frequency.

Lines S and Line 75 do not provide direct access to the Project site and would therefore not be expected to carry the full number of peak hour trips generated by the Project. Currently, the average maximum load factor of Line S is 0.41 for the AM commute meaning only 41 percent of seats are filled in the busiest section on average. The average maximum load factor of Line 75 is 0.38. The capacity of these two lines is therefore not expected to be exceeded by the proposed Project, which would generate up to 25 transit trips in the peak hour and is not directly served by these two routes.

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Line 89 serves the Project site directly and would likely be used by all 25 of the peak hour transit bus riders. The average maximum load factor for any one segment of Line 89 is approximately 0.40. This route currently uses a 25-passenger bus which leaves 15 available seats at the average maximum load factor on this route. If all 25 transit passengers from the Project board the same bus, there would not be sufficient seats to accommodate all riders leaving 10 riders standing on average in the most crowded section of the route. However, this is a local bus line and is therefore meant for short duration trips. Standing passengers over short distances would not significantly impact the capacity of Line 89. Based on this assessment, the Project would not cause the transit ridership to exceed existing transit capacity and this impact would be *less than significant*.

Transit Access and Egress

The conceptual drawing of the Project indicates there would be adequate connections between local transit service and the Project site. It is assumed that sidewalks would be built to the current ADA accessibility guidelines including both clear width and appropriate curb ramp design in accordance to City standards. The Project includes a promenade that surrounds the site and connects across the existing marina entrance via a new pedestrian and bicycle bridge. The promenade would facilitate transit riders from the marina side of the Project site to the bus stops on Monarch Bay Drive and Fairway Drive. Project residents on the east side of Monarch Bay Drive are provided with walkways that lead to the bus stops. Based on this assessment, the Project would provide adequate pedestrian connection between the Project site and transit stops and a *less-than-significant* impact would result in this respect.

Future Transit Service

The Project site is currently served by AC Transit Line 89, which runs along Monarch Bay Drive. Project improvements along this route would not preclude future transit service. Therefore, given the Project would not preclude future transit service from being added, a *less-than-significant* impact would occur.

Consistency with Adopted Plans

The Project's consistency with transit operators' adopted plans was assessed. The Project is not expected to generate additional BART trips to a point that would exceed the current capacity of the BART trains. Construction of the Project would also not affect any future plans established by BART. AC Transit's future plans are also not expected to be inhibited by the proposed Project and a *less-than-significant* impact would result in this respect.

TRAF-3	The proposed Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
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While the Project site is located approximately a mile from the Oakland International Airport, the nature of the Project as a mixed-use, low rise residential, commercial and recreational project is such that it would not result in a change in air traffic patterns. Therefore, *no impact* would occur in this respect.

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Applicable Regulations:

- None

Significance Before Mitigation: No impact.

TRAF-4	The proposed Project would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
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The types of land uses proposed as a part of the Project are generally similar to existing and surrounding uses and thereby are compatible with the existing uses on the Project site and in the surrounding area. Therefore *no impact* would result from hazards as a result of incompatible uses.

The current version of the Project plans shows that the location of the proposed northern driveway of the North Golf Course Residential component of the Project would potentially result in design hazard due to restricted sight distance. Please refer to Figure 3-3, Conceptual Site Plan in the Project Description. The northern most driveway on the east side of Monarch Bay Drive which would provide right-turn in and right-turn out movements, near the intersection of Monarch Bay Drive and Neptune Drive is slightly off-set to the east from Neptune Drive. Southbound through vehicles from Neptune Drive may also access this driveway; whereas all other movements would be restricted by physical barriers. The safety issue results from the fact that the segment of Monarch Bay Drive immediate to the west of the driveway is a curved as Monarch Bay Drive turns into Marina Boulevard. Drivers pulling out of the driveway would experience difficulty observing oncoming traffic moving in a northeasterly direction on Monarch Bay Drive. By the time that drivers pulling out of the driveway are able to see cars traveling north on Monarch Bay Drive, these cars would not have sufficient time to make a safe right turn out of the driveway. Without implementation of adequate mitigation this would result in a *significant* impact.

Impact TRAF-4A: The location of the proposed northern driveway of the North Golf Course Residential component of the Project presents a potential sight distance challenge for cars pulling out of the driveway.

Mitigation Measure TRAF-4A: Remove the North Golf Course northern driveway from the Project plans.

Significance After Mitigation: Less than significant. Since the 64 unit North Golf Course Residential component of the Project would be served by two other access driveways, the small amount of diverted traffic could be accommodated by the remaining two driveways without resulting in secondary impact and this impact would be reduced to a *less-than-significant* level.

The proposed southern driveway of the northern Golf Course Residential component of the Project also has the potential to result in a hazard as a result of the proposed design. As a general rule, it is always preferable to provide a uniform four-legged intersection rather than an off-set leg due to the increase visibility and safety associated with uniform four-legged intersections. In this situation it would be even more advantageous to move the position of this driveway to the north to align with the entrance to the marina to the west at Mulford Point Drive because, as seen in Figure 3-3, Conceptual Site Plan, in Chapter 3, the currently proposed driveway would enter onto Monarch Bay Drive where the stop bar for

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northbound vehicles would be located. If the mitigation measure for the Monarch Bay Drive and Mulford Point Drive intersection (TRAF-1D and TRAF-7F) discussed above is implemented, a roundabout would operate more effectively with a standard fourth leg and would be able to accommodate the added driveway volumes. Overall, the southern driveway of the North Golf Course Residential component would result in a design hazard due to its location in relation to the proposed Monarch Bay Drive and Mulford Point Drive intersection. In the absence of adequate mitigation this would result in a *significant* impact.

Impact TRAF-4B: The proposed southern driveway of the North Golf Course Residential component would potentially result in a design hazard due to its location in relation to the proposed Monarch Bay Drive and Mulford Point Drive intersection.

Mitigation Measure TRAF-4B: Move the Southern Driveway of the North Golf Course residential component to the north, to form a standard four-legged intersection. This measure shall be implemented in coordination with Mitigation Measure TRAF-1D.

Significance After Mitigation: Less than significant. Implementation of Mitigation measure TRAF-4B would reduce the impact regarding the North Golf Course Residential Southern Driveway to a *less-than-significant* level.

TRAF-5	The proposed Project would not result in inadequate emergency access.
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The proposed concept design is required to comply with all City roadway and access standards as well as other requirements in the California Fire Code and California Vehicle Code. The Project is well-served by public streets and based on the concept plan, the proposed Project would not result in inadequate emergency access and a *less-than-significant* impact would result.

Applicable Regulations:

- San Leandro General Plan

Significance Before Mitigation: Less than significant.

TRAF-6	The proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
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Bicycle Facilities

The City of San Leandro Bicycle and Pedestrian Master Plan and the Alameda Countywide Bicycle Plan¹⁵ both include a planned Class II bicycle lane along Monarch Bay Drive between Neptune Drive and Fairway Drive and a planned Class I bicycle path in the marina area of the Project site. The proposed public

¹⁵ Alameda County Transportation Commission, Alameda Countywide Bicycle Plan, adopted October 25, 2012.

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promenade along the waterfront edge would provide the Class I facility identified in the plans and a Class II bicycle lane proposed by the Project would complete the bicycle lane along Monarch Bay Drive.

The increase in automobile trips on Marina Boulevard that would result from the proposed Project could make this route less desirable for cyclists. The existing bike lanes on Williams Street and planned bike lanes and bike routes on Davis Street would provide the primary east/west connections to the Project site via the planned bike lanes on Doolittle Drive and the existing bike route on Neptune Drive. Additionally, there are bike lines providing east/west connection along Fairway Drive/Aladdin Avenue. Most of the traffic generated by the proposed Project would be funneled through the intersection of Monarch Bay Drive and Mulford Point Drive (#19). As such, by limiting driveways along the main access road, the Project would not present significant barriers to bicyclists.

Pedestrian Facilities

As described in Chapter 3 of this Draft EIR, as a part of the Project, a 20 foot wide promenade along the waterfront edge would provide protected walkways for pedestrians in the marina area. As shown in Figure 3-3, Conceptual Site Plan, this promenade would be connected to the west side of Monarch Bay Drive at the existing path just south of Neptune Drive and continue south to the Mulford Point Drive intersection. A similar multi-use path is proposed on the east side of Monarch Bay Drive from the northern driveway to the southern driveway of the North Golf Course Residential.

The portion of Monarch Bay Drive between Marina Boulevard and Fairway Drive is identified in the City's Bicycle and Pedestrian Master Plan as within the San Leandro Marina Pedestrian Improvement Area and targeted pedestrian improvements. Specifically, the plan states that "continuous pedestrian pathways should be created on both sides of Monarch Bay Drive...to facilitate a safe pedestrian environment to this major destination." The plan further requires that "crosswalks, a minimum of 250 to 350 feet apart, should be installed along Monarch Bay Drive to encourage pedestrians to cross at safe locations." Additionally, the plan specifically indicates that a pedestrian crossing should be created at the Monarch Bay Drive and Neptune Drive intersection.¹⁶

The Project will include pedestrian paths along Monarch Bay Drive south of Mulford Point Drive and marked crosswalks along Monarch Bay Drive. Therefore, it does not conflict with the adopted City of San Leandro Bicycle and Pedestrian Master Plan. The Project impact is therefore considered to be *less than significant*.

The effect of the proposed Project on public transportation facilities is addressed above under impact TRAF-2.

Applicable Regulations:

- San Leandro General Plan
- San Leandro Bicycle and Pedestrian Master Plan

Significance Before Mitigation: Less than significant.

¹⁶ City of San Leandro, 2010, City of San Leandro Bicycle and Pedestrian Master Plan, page 50.

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4.13.4 CUMULATIVE IMPACT DISCUSSION

TRAF-7	The proposed Project, in combination with past, present and reasonably foreseeable projects, would result in a significant cumulative impacts with respect to transportation and traffic.
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Near-Term Cumulative Conditions

In order to provide a realistic analysis of the potential impacts of the proposed Project, several scenarios were analyzed. The **Near-Term Cumulative Conditions** analysis projects how the study area's transportation system would operate with the full build-out of the Project in combination with the growth and changes of the surrounding community by the year 2020. The analysis assumed certain planned roadway facilities would be completed and land use growth projected in the Countywide Model for the year 2020.

Planned Developments and Improvements

In addition to those improvements identified above under Baseline Conditions, the following major planned developments and roadways and transit improvements in the vicinity of the Project site are included in this analysis based on discussions with San Leandro City staff:

- Kaiser Permanente San Leandro Medical Center and Mixed-Use Retail Development would be fully completed. The Kaiser Permanente San Leandro Medical Center driveway on Marina Boulevard would be signalized and provide westbound left-turn access into the Kaiser Permanente San Leandro Medical Center site in addition to the eastbound right-turn inbound and northbound right-turn outbound access.
- Traffic signal timing at Aladdin Avenue and Alvarado Street Intersection would be optimized as part of the mitigation measures for the Kaiser Permanente San Leandro Medical Center project.
- I-880 would have a High Occupancy Vehicle (HOV) lane installed in the southbound direction from Hegenberger Road to the current HOV lane located south of Marina Boulevard.
- Marina Boulevard, from Teagarden Street to Alvarado Street, would be widened to six lanes (from the existing four lanes).
- Alvarado Street, from Marina Boulevard to Aladdin Avenue, would be widened to four lanes (from the existing two lanes with a two-way left turn lane).
- Davis Street (SR 112), between Warden Avenue-Timothy Drive to the I-880 interchange, would be widened to six lanes (from the existing four lanes) and is expected to be completed in 2015.
- Bus Rapid Transit (BRT) would be in operation along International Boulevard and East 14th Street to the San Leandro BART station, which is the planned southern terminus of this enhanced bus service.

Near-Term Cumulative Intersection Operations

The weekday and Saturday midday peak hour intersection turning movement volumes and lane configurations for the **Near-Term Cumulative scenario under No Project**, and **Plus Project Conditions** are provided in Appendix H. The information was used to calculate the level of service and identify potential

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impacts at the Analysis Intersections based on the City's significance thresholds. The level of service results are summarized in Table 4.13-23, Table 4.13-24 and Table 4.13-25 and the detailed calculation worksheets are provided in Appendix H.

Signalized Intersections

Under **Near-Term Cumulative No Project** scenario, two signalized intersections are projected to operate below the City's standard of LOS D. The intersection of I-880 southbound ramps at Marina Boulevard (#14) would operate at LOS E and would have an average delay of 72.5 seconds and the intersection of San Leandro Boulevard and Marina Boulevard (#18) would operate at LOS F and would have an average delay of 180.8 seconds in the PM peak hour. The addition of traffic associated with development of the proposed Project would cause the v/c ratio to increase by 0.07 at both intersections.

Furthermore, the Project traffic would cause the operations at these two intersections to operate below the City standard during other analysis periods whereas they would operate at acceptable levels without implementation of the Project. As seen in Tables 4.13-23 and 4.13-24, the I-880 southbound ramps intersection (#14) would reduce to LOS E during both AM and Saturday peak hours and the San Leandro Boulevard intersection (#18) would reduce to LOS E in the AM peak hour.

The Project traffic would also cause the intersections of Doolittle Drive and Marina Boulevard (#11) during the weekday analysis periods and Aladdin Avenue and Alvarado Street (#28) during the PM peak hour to deteriorate to substandard operations. Therefore, in the absence of adequate mitigation, a *significant* cumulative impact would occur with regards to intersection level of service at these intersections.

Impact TRAF-7A: The addition of traffic associated with implementation of the proposed Project would cause the intersection level of service at Doolittle Drive and Marina Boulevard (#11) to reduce from LOS D to LOS F in the AM and PM peak hours under Near-Term Cumulative Conditions.

Mitigation Measure TRAF-7A: Implementation of Mitigation Measures TRAF-1A.1 – TRAF-1A.2 for the eastbound approach identified under the baseline **Plus Project** condition.

Significance After Mitigation: Less than significant. Implementation of these mitigation measures would improve the operations of this intersection to LOS D and lessen the cumulative impacts to a *less-than-significant* level during the AM and PM peak hours.

As discussed above, the addition of Project traffic would cause the operations at the intersection of I-880 southbound ramps and Marina Boulevard (#14) to reduce to LOS E in the AM and Saturday peak hours, adding to the substandard operations to further reduce the service levels from LOS E to LOS F in the PM peak hour and cause the v/c ratio to increase by 0.07. Therefore, in the absence of adequate mitigation this would result in a *significant* impact.

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TABLE 4.13-23 INTERSECTION LEVEL OF SERVICE – NEAR TERM CUMULATIVE CONDITIONS – AM PEAK HOUR

No	Street	Street	Control	Near Term		Near Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
1	Doolittle Dr (SR 61)	Davis St (SR 112)	Sig	31.2	C	31.6	C		31.6	C
2	Phillips Ln	Davis St (SR 112)	Sig	18.4	B	18.5	B		18.5	B
3	Warden Av-Timothy Dr	Davis St (SR 112)	Sig	19.6	B	19.4	B		19.4	B
4	I-880 Southbound ramps	Davis St (SR 112)	Sig	14.2	B	14.2	B		14.2	B
5	I-880 Northbound ramps	Davis St (SR 112)	Sig	14.5	B	14.5	B		14.5	B
6	Doolittle Dr	Williams St	Sig	24.0	C	28.8	C		28.8	C
7	Westgate Pkwy	Williams St	Sig	16.0	B	16.0	B		16.0	B
8	Merced St	Williams St	Sig	29.3	C	29.1	C		29.1	C
9	Neptune Dr	Marina Blvd	TWSC	1.3 (10.0)	A(B)	1.0 (21.8)	A (C)		1.0 (21.8)	C
10	Aurora Dr*	Marina Blvd	AWSC	9.9	A	75.7	F		9.0/10.7	A/B
11	Doolittle Dr	Marina Blvd	Sig	39.2	D	93.8	F		54.9	D
12	Merced St	Marina Blvd	Sig	37.4	D	54.8	D		54.8	D
13	Kaiser driveway	Marina Blvd	TWSC	6.6	A	6.8	A		6.8	A
14	I-880 Southbound ramps	Marina Blvd	Sig	38.6	D	59.8	E		26.8	C
15	I-880 Northbound ramps	Marina Blvd	Sig	15.5	B	16.5	B		16.5	B
16	Wayne Av-Teagarden St	Marina Blvd	Sig	27.0	C	26.4	C		26.9	C
17	Alvarado St	Marina Blvd	Sig	24.0	C	26.1	C		28.6	C
18	San Leandro Blvd	Marina Blvd	Sig	53.2	D	66.8	E		66.8	E
19	Monarch Bay Dr	Mulford Point Dr	AWSC	7.6	A	17.4	C		7.3	A
20	Monarch Bay Dr	Pescador Pt Dr	AWSC	7.5	A	8.4	A		8.4	A
21	Monarch Bay Dr	Fairway Dr	AWSC	7.9	A	8.8	A		8.8	A
22	Aurora Dr	Fairway Dr	AWSC	8.4	A	10.2	B		10.2	B
23	Doolittle Dr	Fairway Dr	Sig	16.7	B	18.6	B		18.6	B
24	Merced St	Fairway Dr	Sig	33.1	C	34.6	C		34.6	C
25	Garfield Rd	Fairway Dr	Sig	11.8	B	7.2	A		7.2	A
26	Miller St	Fairway Dr	Sig	17.6	B	18.9	B		18.9	B
27	Aladdin Av	Teagarden St	Sig	37.5	D	44.1	D		44.1	D
28	Aladdin Av	Alvarado St	Sig	36.7	D	39.3	D		25.3	C
29	Merced St	Wells Fargo driveway	Sig	1.0	A	1.0	A		1.0	A
30	Merced St	Republic Av	Sig	10.0	B	10.3	B		10.3	B
31	Merced St	West Av 140th	Sig	1.9	A	1.9	A		1.9	A

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TABLE 4.13-23 INTERSECTION LEVEL OF SERVICE – NEAR TERM CUMULATIVE CONDITIONS – AM PEAK HOUR

No	Street	Street	Control	Near Term		Near Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS

Notes: Sig = Signalized; TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach.

Change in v/c or delay is shown when relevant to significance determination

Bold font indicates substandard operations

Shaded cells indicate significant impact

* The mitigated results of both roundabout/signalization are shown for the Aurora Drive/Marina Boulevard intersection.

Source: Kittelson & Associates, 2014.

Impact TRAF-7B: The addition of traffic associated with implementation of the proposed Project would cause I-880 southbound ramps and Marina Boulevard (#14) to reduce to LOS E during both AM and Saturday peak hours, and would further reduce the service levels from LOS E to LOS F in the PM peak hour, under Near-Term Cumulative Conditions.

Mitigation Measure TRAF-7B.1: Modify the traffic signal to a two-phase operation to provide non-conflicting:

- Eastbound and westbound through movements on Marina Boulevard during the first phase.
- Southbound right-turn, northbound right-turn and westbound left-turn movements during the second phase.

Mitigation Measure TRAF-7B.2: Prohibit westbound U-turn movements.

Significance After Mitigation: Significant and unavoidable. Implementation of the these mitigation measures would improve the operations at the intersection of I-880 southbound ramps and Marina Boulevard to LOS C in the AM and Saturday peak hours and to LOS D in the PM peak hour, thereby reducing the Project impacts to a less-than-significant level. However, because this ramp intersection is under Caltrans' jurisdiction, the implementation of timing and phasing Mitigation Measures are not under the City's jurisdiction. Therefore, this impact would remain *significant and unavoidable*.

As discussed above, the addition of traffic associated with implementation of the proposed Project would cause operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) to reduce from LOS D to LOS E in the AM peak hour; and would add to the existing substandard LOS F in the PM peak hour and cause the v/c ratio to increase by 0.07. Therefore, in the absence of adequate mitigation this impact would be *significant*.

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TABLE 4.13-24 INTERSECTION LEVEL OF SERVICE – NEAR TERM CUMULATIVE CONDITIONS – PM PEAK HOUR

No	Street	Street	Control	Near Term		Near Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
1	Doolittle Dr (SR 61)	Davis St (SR 112)	Sig	22.0	C	24.9	C		24.9	C
2	Phillips Ln	Davis St (SR 112)	Sig	37.3	D	39.2	D		39.2	D
3	Warden Av-Timothy Dr	Davis St (SR 112)	Sig	36.8	D	39.3	D		39.3	D
4	I-880 Southbound ramps	Davis St (SR 112)	Sig	13.8	B	14.1	B		14.1	B
5	I-880 Northbound ramps	Davis St (SR 112)	Sig	17.3	B	17.2	B		17.2	B
6	Doolittle Dr	Williams St	Sig	17.2	B	18.4	B		18.4	B
7	Westgate Pkwy	Williams St	Sig	29.5	C	29.6	C		29.6	C
8	Merced St	Williams St	Sig	26.2	C	26.2	C		26.2	C
9	Neptune Dr	Marina Blvd	TWSC	0.5 (11.6)	A (B)	0.7 (30.4)	A (D)		0.7 (30.4)	A (D)
10	Aurora Dr*	Marina Blvd	AWSC	10.2	B	66.1	F		8.4/9.4	A/A
11	Doolittle Dr	Marina Blvd	Sig	35.9	D	73.1	E		47.9	D
12	Merced St	Marina Blvd	Sig	39.1	D	49.2	D		49.2	D
13	Kaiser driveway	Marina Blvd	TWSC	21.6	C	23.2	C		23.2	C
14	I-880 Southbound ramps	Marina Blvd	Sig	72.5	E	87.6	F	0.07	38.8	D
15	I-880 Northbound ramps	Marina Blvd	Sig	22.0	C	24.8	C		24.8	C
16	Wayne Av-Teagarden St	Marina Blvd	Sig	33.2	C	32.8	C		32.6	C
17	Alvarado St	Marina Blvd	Sig	45.4	D	50.4	D		54.3	D
18	San Leandro Blvd	Marina Blvd	Sig	180.8	F	192.4	F	0.07	192.4	F
19	Monarch Bay Dr	Mulford Point Dr	AWSC	8.5	A	52.9	F		8.1	A
20	Monarch Bay Dr	Pescador Pt Dr	AWSC	7.8	A	8.9	A		8.9	A
21	Monarch Bay Dr	Fairway Dr	AWSC	9.1	A	10.7	B		10.7	B
22	Aurora Dr	Fairway Dr	AWSC	8.7	A	11.0	B		11.0	B
23	Doolittle Dr	Fairway Dr	Sig	17.3	B	19.4	B		19.4	B
24	Merced St	Fairway Dr	Sig	35.0	C	36.5	D		36.5	D
25	Garfield Rd	Fairway Dr	Sig	15.7	B	12.3	B		12.3	B
26	Miller St	Fairway Dr	Sig	26.5	C	27.4	C		27.4	C
27	Aladdin Av	Teagarden St	Sig	32.4	C	35.3	D		35.3	D
28	Aladdin Av	Alvarado St	Sig	54.2	D	57.1	E		36.0	D
29	Merced St	Wells Fargo driveway	Sig	3.6	A	3.8	A		3.8	A
30	Merced St	Republic Av	Sig	21.3	C	21.3	C		21.3	C
31	Merced St	West Av 140th	Sig	3.2	A	3.2	A		3.2	A

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TABLE 4.13-24 INTERSECTION LEVEL OF SERVICE – NEAR TERM CUMULATIVE CONDITIONS – PM PEAK HOUR

No	Street	Street	Control	Near Term		Near Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
Notes: Sig = Signalized; TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach.										
Change in v/c or delay is shown when relevant to significance determination										
Bold font indicates substandard operations										
Shaded cells indicate significant impact										
* The mitigated results of both roundabout/signalization are shown for the Aurora Drive/Marina Boulevard intersection.										
Source: Kittelson & Associates, 2014.										

TABLE 4.13-25 INTERSECTION LEVEL OF SERVICE – NEAR TERM CUMULATIVE CONDITIONS – SATURDAY MIDDAY PEAK HOUR

No	Street	Street	Control	Near Term		Near Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
1	Doolittle Dr (SR 61)	Davis St (SR 112)	Sig	19.3	B	19.2	B		19.2	B
10	Aurora Dr*	Marina Blvd	AWSC	10.1	B	35.6	E		7.1/7.8	A/A
11	Doolittle Dr	Marina Blvd	Sig	31.9	C	45.0	D		44.0	D
12	Merced St	Marina Blvd	Sig	36.8	D	37.6	D		37.6	D
13	Kaiser driveway	Marina Blvd	TWSC	14.3	B	14.5	B		14.5	B
14	I-880 Southbound ramps	Marina Blvd	Sig	53.0	D	57.1	E		20.3	C
15	I-880 Northbound ramps	Marina Blvd	Sig	14.2	B	14.6	B		14.6	B
22	Aurora Dr	Fairway Dr	AWSC	8.2	A	10.1	B		10.1	B
23	Doolittle Dr	Fairway Dr	Sig	15.3	B	16.2	B		16.2	B
24	Merced St	Fairway Dr	Sig	34.0	C	36.6	D		36.6	D
Notes: Sig = Signalized; TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach.										
Change in v/c or delay is shown when relevant to significance determination										
Bold font indicates substandard operations										
Shaded cells indicate significant impact										
* The mitigated results of both roundabout/signalization are shown for the Aurora Drive/Marina Boulevard intersection.										
Source: Kittelson & Associates, 2014.										

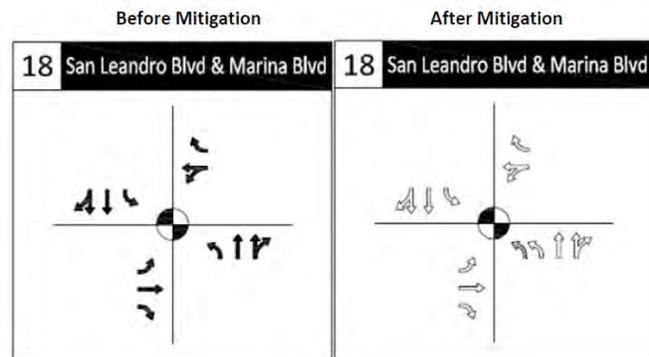
Impact TRAF-7C: The proposed Project would cause operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) to reduce from LOS D to LOS E in the AM peak hour, adding to the existing substandard LOS F in the PM peak hour and cause the volume-to-capacity (v/c) ratio to increase by 0.07 under Near-Term Cumulative Conditions.

Mitigation Measure TRAF-7C.1: Add a northbound left-turn lane on San Leandro Boulevard to provide two left-turn lanes: one through lane and one shared through-right turn lane.

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Mitigation Measure TRAF-7C.2: Restripe lanes on the west leg to provide two corresponding receiving lanes.

The lane geometries before and after implementation of these Mitigation Measures are shown in the figure opposite.



Significance After Mitigation: Significant and unavoidable. Mitigation Measure TRAF-7C.1 and TRAF-7C.2 are identified in the Kaiser Permanente San Leandro Medical Center/Mixed Use Retail Development Project EIR and would mitigate the **Near-Term** cumulative impact during the AM and PM peak hours to less than significant. However, the available right-of-way on the northbound approach would not be sufficient to accommodate the two left-turn lanes, one through lane, and one shared through-right turn lane, as well as a bike lane. Therefore, this measure is considered to be infeasible and the impact would remain *significant and unavoidable*.

The addition of Project traffic would cause the level of service at the intersection of Aladdin Avenue and Alvarado Street (#28) to reduce from LOS D to LOS E in the PM peak hour. In the absence of adequate mitigation, this would result in a *significant* impact.

Impact TRAF-7D: The proposed Project would cause the level of service at the intersection of Aladdin Avenue and Alvarado Street (#28) to reduce from LOS D to LOS E in the PM peak hour under **Near-Term Cumulative** Conditions.

Mitigation Measure TRAF-7D: Optimize traffic signal cycle length at the intersection of Aladdin Avenue and Alvarado Street. This signal does not operate in coordination with any other signal; therefore, the cycle length can be adjusted without affecting other signals in the system.

Significance After Mitigation: Less than significant. Implementation of this Mitigation Measure would improve the operations to LOS D in the PM peak hour and lessen the Project impacts to a *less-than-significant* level.

Unsignalized Intersections

All unsignalized intersections are projected to operate at acceptable levels under the **Near-Term Cumulative No Project** scenario. However, the Project generated traffic would cause two of the all-way stop controlled intersections to reduce to substandard levels. With the addition of Project related traffic, the Aurora Drive and Marina Boulevard intersection (#10) would operate at LOS F during all three analysis periods and the Monarch Bay Drive and Mulford Point Drive intersection (#19) would reduce to LOS F during the PM peak hour. In the absence of adequate mitigation, this would result in a *significant* impact.

As discussed above, the addition of Project traffic would cause the level of service at the intersection of Aurora Drive and Marina Boulevard (#10) to reduce from LOS A to LOS F in the AM peak hour and from LOS B to LOS F in the PM and Saturday peak hours. Therefore, in the absence of adequate mitigation a *significant* impact would result in this respect.

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Impact TRAF-7E: The proposed Project would cause the level of service at the intersection of Aurora Drive and Marina Boulevard (#10) to reduce from LOS A to LOS F in the AM peak hour and from LOS B to LOS F in the PM peak hour and from LOS B to LOS E in the Saturday peak hour.

Mitigation Measure TRAF-7E: Implementation of Mitigation Measure TRAF-1C, installing a mini-roundabout or a traffic signal, would lessen the near term cumulative impacts to *less than significant*. The mini-roundabout would improve the operations to LOS A in all three peak period hours. A traffic signal would improve the operation of the intersection to LOS B in the AM peak hour and LOS A in the PM and Saturday peak hours.

Significance After Mitigation: Less than significant.

As discussed above, the addition of traffic associated with implementation of the proposed Project would cause the level of service at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) to reduce from LOS A to LOS F in the PM peak hour. In the absence of adequate mitigation this would result in a *significant* impact.

Impact TRAF-7F: The proposed Project would cause the level of service at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) to reduce from LOS A to LOS F in the PM peak hour.

Mitigation Measure TRAF-7F: Implement Mitigation Measure TRAF-1D by installing a roundabout. This would improve the operations to LOS A in the PM peak hour.

Significance After Mitigation: Less than significant. Implementation of this Mitigation Measure would improve the operation to LOS A and lessen the Project's cumulative impacts to *less than significant* during the PM peak hour.

Near-Term Cumulative Freeway Operations

The weekday peak hour freeway operations are presented in Table 4.13-26, and the detailed calculation worksheets are provided in Appendix H. Similar to Baseline Conditions, the results indicate that the mainline segment of I-880 northbound between Marina Boulevard and Davis Street would operate at LOS E in the AM peak hour under **Near-Term Cumulative No Project** conditions.

The same segment would also operate at LOS E in the PM peak hour. The Project would add traffic volume equivalent to only 0.09 percent to the freeway design capacity of the mainline in the AM peak hour and 0.2 percent in the PM peak hour. Furthermore, the mainline segment of I-880 southbound between Davis Street and Marina Boulevard would also operate at LOS E in the PM peak hour under No Project conditions and the Project would add traffic volume equivalent to 0.4 percent of the freeway mainline design capacity. Since the Project would not increase traffic by more than one percent of the freeway's design capacity at these locations, the Project impacts are considered to be *less than significant*. All other study segments are projected to operate at LOS D or better.

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TABLE 4.13-26 FREEWAY LEVEL OF SERVICE – NEAR TERM CUMULATIVE CONDITIONS – AM AND PM PEAK HOUR

Location	Type	Near Term			Near Term + Project		
		Volume ^a	Density ^b	LOS ^c	Volume ^a	Density ^b	LOS ^c
AM PEAK HOUR							
I-880 Northbound							
Washington Ave to Marina Blvd	Mainline	8,335	29.8	D	8,484	30.6	D
Marina Blvd to Davis St	Mainline	8,790	38.6	E	8,797	38.7	E
	Weave ^d	1,591	N/A	C	1,597	N/A	C
Davis St to 98th Ave	Mainline	6,526	29.0	D	6,572	29.3	D
I-880 Southbound							
98th Ave to Davis St	Mainline	6,994	24.0	C	7,130	24.6	C
Davis St to Marina Blvd	Mainline	6,837	27.0	C	6,844	27.0	C
	Weave ^d	1,097	N/A	A	1,103	N/A	A
Marina Blvd to Washington Ave	Mainline	7,316	25.3	C	7,389	25.6	C
PM PEAK HOUR							
I-880 Northbound							
Washington Ave to Marina Blvd	Mainline	8,034	28.4	D	8,095	28.7	D
Marina Blvd to Davis St	Mainline	8,254	37.3	E	8,292	37.7	E
	Weave ^d	1,994	N/A	C	2,031	N/A	C
Davis St to 98th Ave	Mainline	6,440	28.5	D	6,511	28.9	D
I-880 Southbound							
98th Ave to Davis St	Mainline	7,281	25.2	C	7,344	25.4	C
Davis St to Marina Blvd	Mainline	8,760	38.3	E	8,798	38.7	E
	Weave ^d	1,616	N/A	B	1,654	N/A	B
Marina Blvd to Washington Ave	Mainline	8,359	30.0	D	8,504	30.7	D

a. Volume = vehicles per hour (vph)

b. Density = passenger car per mile per lane (pc/m/ln)

c. LOS = Level of Service

d. Marina Blvd. to Davis St. analyzed as a weaving section using the Leisch Method as described in the Caltrans Design Manual, May 7, 2012. The volume shown for this segment is the weaving volume.

Source: Kittelson & Associates, Inc., 2014.

Long Term Cumulative Conditions

The Long-Term Cumulative Conditions analysis projects how the study area’s transportation system would operate with the full build-out of the Project in combination with anticipated growth and changes in the surrounding community, by the year 2035.

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Planned Developments and Improvements

The land use and roadway network assumptions for the Long-Term Cumulative Conditions are based on the Countywide Model for the year 2035. It includes all the planned developments and improvements identified under Baseline and **Near-Term Cumulative Conditions** and the full buildout of the Kaiser Permanente San Leandro Medical Center. No other roadway improvements in the study area are assumed.

Long-Term Cumulative Intersection Operations

The peak hour and Saturday intersection turning movement volumes and lane configurations for Long-Term Cumulative Conditions with and without the Project are provided in Appendix H. This information was used to calculate the level of service and identify potential impacts at the Analysis Intersections based on the City's significance thresholds. The level of service results are summarized in Table 4.13-27, Table 4.13-28, and Table 4.13-29 and the detailed calculation worksheets are provided in Appendix H.

Signalized Intersections

As shown in Tables 4.13-26, 4.13-27, and 4.13-28, under the **Long-Term Cumulative No Project** scenario, seven signalized intersections are projected to operate below the City's standard of LOS D. Two of these intersections are located along Marina Boulevard. The I-880 southbound ramps intersection (#14) is projected to operate at LOS E in the PM and Saturday peak hours, the San Leandro Boulevard intersection (#18) would operate at LOS F in the PM and AM peak hours. Two Davis Street intersections, at Phillips Lane (#2) and at Warden Avenue/Timothy Drive (#3), would both operate at LOS E in the PM peak hour. The Miller Street and Fairway Drive intersection (#26) would operate at LOS E in the AM peak hour and the Aladdin Avenue and Teagarden Street intersection (#27) would operate at LOS F in the AM peak hour.

The addition of Project traffic would increase the substandard operations at these locations. However, it would only cause the v/c ratios to increase by 0.05 or more at two intersections. Therefore, only two of the seven intersections have significant impacts under Long-Term Cumulative Conditions where the v/c ratios would increase by 0.10 at the I-880 southbound ramps and Marina Boulevard intersection (#14) during the PM peak hour; and the service level would reduce from LOS D to LOS E in the AM peak hour. The v/c ratios at the San Leandro Boulevard and Marina Boulevard intersection (#18) would increase by 0.07 in the AM peak hour and 0.10 in the PM peak hour.

The Project traffic would also cause the service levels to reach unacceptable levels at three signalized intersections where they would operate acceptably under Long-Term Cumulative No Project conditions. The Marina Boulevard intersections of Doolittle Drive (#11) would reduce to LOS F during the weekday analysis periods and Merced Street intersection (#12) would reduce from LOS D to LOS E during the AM and PM peak hours. The intersection of Aladdin Avenue and Teagarden Street intersection (#27) would also reduce from LOS D to LOS E during the PM peak hour.

As discussed above, the addition of traffic associated with implementation of the proposed Project would cause two intersections already below standard under Long-Term Cumulative No Project conditions to worsen by 0.05 or more and would cause three intersections to worsen from an acceptable LOS (LOS D or better) to an unacceptable LOS (LOS E or F). Therefore, five intersections would be significantly impacted in the absence of adequate mitigation measures under Long-Term Cumulative Plus Project conditions.

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TABLE 4.13-27 INTERSECTION LEVEL OF SERVICE – LONG TERM CUMULATIVE CONDITIONS – AM PEAK HOUR

No	Street	Street	Control	Long Term		Long Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
1	Doolittle Dr (SR 61)	Davis St (SR 112)	Sig	44.0	D	44.2	D		44.2	D
2	Phillips Ln	Davis St (SR 112)	Sig	31.1	C	32.6	C		32.6	C
3	Warden Av-Timothy Dr	Davis St (SR 112)	Sig	17.6	B	17.6	B		17.6	B
4	I-880 Southbound ramps	Davis St (SR 112)	Sig	27.6	C	28.4	C		28.4	C
5	I-880 Northbound ramps	Davis St (SR 112)	Sig	14.5	B	14.4	B		14.4	B
6	Doolittle Dr	Williams St	Sig	21.3	C	23.2	C		23.2	C
7	Westgate Pkwy	Williams St	Sig	16.6	B	16.8	B		16.7	B
8	Merced St	Williams St	Sig	29.9	C	29.4	C		30.1	C
9	Neptune Dr	Marina Blvd	TWSC	1.3 (10.0)	A (B)	1.1 (25.2)	A (C)		1.1 (25.2)	A (C)
10	Aurora Dr*	Marina Blvd	AWSC	10.0	A	81.2	F		9.2/10.6	A/B
11	Doolittle Dr	Marina Blvd	Sig	38.0	D	94.6	F		54.3	D
12	Merced St	Marina Blvd	Sig	53.7	D	65.1	E		45.5	D
13	Kaiser driveway	Marina Blvd	TWSC	6.7	A	6.9	A		6.9	A
14	I-880 Southbound ramps	Marina Blvd	Sig	46.4	D	66.7	E		33.3	C
15	I-880 Northbound ramps	Marina Blvd	Sig	19.3	B	21.5	C		21.5	C
16	Wayne Av-Teagarden St	Marina Blvd	Sig	28.8	C	26.0	C		26.1	C
17	Alvarado St	Marina Blvd	Sig	28.7	C	35.3	D		39.4	D
18	San Leandro Blvd	Marina Blvd	Sig	205.4	F	223.1	F	0.07	223.1	F
19	Monarch Bay Dr	Mulford Point Dr	AWSC	7.6	A	18.0	C		7.3	A
20	Monarch Bay Dr	Pescador Pt Dr	AWSC	7.5	A	8.4	A		8.4	A
21	Monarch Bay Dr	Fairway Dr	AWSC	7.9	A	8.8	A		8.8	A
22	Aurora Dr	Fairway Dr	AWSC	8.3	A	10.1	B		10.1	B
23	Doolittle Dr	Fairway Dr	Sig	17.0	B	18.8	B		18.8	B
24	Merced St	Fairway Dr	Sig	33.1	C	34.7	C		34.7	C
25	Garfield Rd	Fairway Dr	Sig	9.5	A	8.8	A		8.8	A
26	Miller St	Fairway Dr	Sig	57.3	E	65.3	E	0.02	65.3	E
27	Aladdin Av	Teagarden St	Sig	97.6	F	106.0	F	0.03	106.0	F
28	Aladdin Av	Alvarado St	Sig	52.8	D	51.1	D		51.1	D
29	Merced St	Wells Fargo driveway	Sig	1.3	A	1.3	A		1.3	A
30	Merced St	Republic Av	Sig	11.2	B	11.5	B		11.5	B
31	Merced St	West Av 140th	Sig	1.9	A	2.0	A		2.0	A

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TABLE 4.13-27 INTERSECTION LEVEL OF SERVICE – LONG TERM CUMULATIVE CONDITIONS – AM PEAK HOUR

No	Street	Street	Control	Long Term		Long Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS

Notes: Sig = Signalized; TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach.

Change in v/c or delay is shown when relevant to significance determination

Bold font indicates substandard operations

Shaded cells indicate significant impact

* The mitigated results of both roundabout/signalization are shown for the Aurora Drive/Marina Boulevard intersection.

Source: Kittelson & Associates, 2014.

Impact TRAF-7G: The proposed Project would cause the intersection level of service of the intersection of Doolittle Drive and Marina Boulevard (#11) to reduce from LOS D to LOS F in the AM and PM peak hours.

Mitigation Measure TRAF-7G: Implement Mitigation Measures TRAF-1A.1 and TRAF-1A.2.

Significance After Mitigation: Less than significant. Implementation of Mitigation Measure TRAF-7G would improve the operations to LOS D and lessen this cumulative impact to less-than-significant levels during the AM and PM peak hours.

Additionally, as discussed above, the addition of traffic associated with implementation of the proposed Project would cause the intersection level of service of the intersection of Merced Street and Marina Boulevard (#12) to reduce from LOS D to LOS E in the AM and PM peak hours. In the absence of adequate mitigation, this would result in a *significant* impact.

Impact TRAF-7H: The proposed Project would cause the intersection of Merced Street and Marina Boulevard (#12) to reduce from LOS D to LOS E during the AM and PM peak hours

Mitigation Measure TRAF-7H: Modify the traffic signal phasing and optimize cycle length and signal split timing based on real time traffic demands by improving operations of recently implemented, adaptive traffic signals at the intersection of Merced Street and Marina Boulevard (#12).

Significance After Mitigation: Less than significant. Implementation of this Mitigation Measure would improve the operations at this intersection to LOS D in both AM and PM peak hours and reduce the impact to a less-than-significant level.

As discussed above, the addition of Project traffic would cause the operations at the intersection of I-880 southbound ramps and Marina Boulevard (#14) to reduce from LOS D to LOS E in the AM peak hour; and it would add to the existing substandard operations to further reduce the level of service from LOS E to LOS F in the PM peak hours as well cause the v/c ratio to increase by 0.10 in the PM peak hour which is higher than the 0.05 allowed by the City. Saturday peak hours would continue operating at LOS E as well as cause the v/c ratio to increase by 0.03. In the absence of adequate mitigation, a *significant* impact would result in this respect.

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TABLE 4.13-28 INTERSECTION LEVEL OF SERVICE – LONG TERM CUMULATIVE CONDITIONS – PM PEAK HOUR

No	Street	Street	Control	Long Term		Long Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
1	Doolittle Dr (SR 61)	Davis St (SR 112)	Sig	29.3	C	35.6	D		35.6	D
2	Phillips Ln	Davis St (SR 112)	Sig	72.2	E	81.1	F	0.03	81.1	F
3	Warden Av-Timothy Dr	Davis St (SR 112)	Sig	58.0	E	63.6	E	0.01	63.6	E
4	I-880 Southbound ramps	Davis St (SR 112)	Sig	16.3	B	16.9	B		16.9	B
5	I-880 Northbound ramps	Davis St (SR 112)	Sig	16.6	B	16.9	B		16.9	B
6	Doolittle Dr	Williams St	Sig	19.6	B	21.2	C		21.2	C
7	Westgate Pkwy	Williams St	Sig	31.1	C	31.3	C		31.5	C
8	Merced St	Williams St	Sig	27.5	C	27.1	C		32.7	C
9	Neptune Dr	Marina Blvd	TWSC	0.5 (11.7)	A (B)	0.8 (34.2)	A (D)		0.5 (25.5)	A (D)
10	Aurora Dr*	Marina Blvd	AWSC	10.3	B	67.0	F		8.4/7.7	A/A
11	Doolittle Dr	Marina Blvd	Sig	39.0	D	91.2	F		50.3	D
12	Merced St	Marina Blvd	Sig	44.2	D	63.8	E		54.4	D
13	Kaiser driveway	Marina Blvd	TWSC	21.3	C	25.3	C		25.3	C
14	I-880 Southbound ramps	Marina Blvd	Sig	79.3	E	102.3	F	0.10	49.1	D
15	I-880 Northbound ramps	Marina Blvd	Sig	33.9	C	41.7	D		41.7	D
16	Wayne Av-Teagarden St	Marina Blvd	Sig	38.8	D	42.3	D		42.3	D
17	Alvarado St	Marina Blvd	Sig	100.0	F	119.2	F	0.01	119.2	F
18	San Leandro Blvd	Marina Blvd	Sig	326.5	F	349.4	F	0.10	349.4	F
19	Monarch Bay Dr	Mulford Point Dr	AWSC	8.5	A	52.6	F		8.1	A
20	Monarch Bay Dr	Pescador Pt Dr	AWSC	7.8	A	8.9	A		8.9	A
21	Monarch Bay Dr	Fairway Dr	AWSC	9.0	A	10.6	B		10.6	B
22	Aurora Dr	Fairway Dr	AWSC	8.7	A	11.1	B		11.1	B
23	Doolittle Dr	Fairway Dr	Sig	18.4	B	20.4	C		20.4	C
24	Merced St	Fairway Dr	Sig	45.9	D	49.6	D		53.5	D
25	Garfield Rd	Fairway Dr	Sig	14.9	B	15.2	B		15.2	B
26	Miller St	Fairway Dr	Sig	36.2	D	37.6	D		37.6	D
27	Aladdin Av	Teagarden St	Sig	52.2	D	59.0	E		37.0	D
28	Aladdin Av	Alvarado St	Sig	48.4	D	50.2	D		50.2	D
29	Merced St	Wells Fargo driveway	Sig	3.1	A	3.1	A		4.6	A
30	Merced St	Republic Av	Sig	21.0	C	20.8	C		26.0	C
31	Merced St	West Av 140th	Sig	3.1	A	3.2	A		3.2	A

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TABLE 4.13-28 INTERSECTION LEVEL OF SERVICE – LONG TERM CUMULATIVE CONDITIONS – PM PEAK HOUR

No	Street	Street	Control	Long Term		Long Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
Notes: Sig = Signalized; TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach. Change in v/c or delay is shown when relevant to significance determination.										
Bold font indicates substandard operations.										
Shaded cells indicate significant impact.										
* The mitigated results of both roundabout/signalization are shown for the Aurora Drive/Marina Boulevard intersection.										
Source: Kittelson & Associates, 2014.										

TABLE 4.13-29 INTERSECTION LEVEL OF SERVICE – LONG TERM CUMULATIVE CONDITIONS – SATURDAY MIDDAY PEAK HOUR

No	Street	Street	Control	Long Term		Long Term + Project		Change v/c or Delay	After Mitigation	
				Delay	LOS	Delay	LOS		Delay	LOS
1	Doolittle Dr (SR 61)	Davis St (SR 112)	Sig	21.2	C	21.3	C		21.3	C
10	Aurora Dr*	Marina Blvd	AWSC	10.2	B	37.3	E		7.2/7.8	A/A
11	Doolittle Dr	Marina Blvd	Sig	32.3	C	46.2	D		45.2	D
12	Merced St	Marina Blvd	Sig	42.3	D	44.1	D		44.1	D
13	Kaiser driveway	Marina Blvd	TWSC	14.0	B	14.1	B		14.5	B
14	I-880 Southbound ramps	Marina Blvd	Sig	60.3	E	64.4	E	0.03	22.4	C
15	I-880 Northbound ramps	Marina Blvd	Sig	18.5	B	19.2	B		19.2	B
22	Aurora Dr	Fairway Dr	AWSC	8.2	A	10.0	B		10.0	A
23	Doolittle Dr	Fairway Dr	Sig	15.4	B	16.5	B		16.5	B
24	Merced St	Fairway Dr	Sig	36.1	D	38.5	D		38.5	D

Notes: Sig = Signalized; TWSC = Two-Way Stop Controlled; AWSC = All-Way Stop Controlled; LOS = Level of Service; Delay = Weighted average delay of all intersection approaches; the number in parentheses for stop-controlled intersection indicates the average delay on the worst approach.

Change in v/c or delay is shown when relevant to significance determination

Bold font indicates substandard operations

Shaded cells indicate significant impact

* The mitigated results of both roundabout/signalization are shown for the Aurora Drive/Marina Boulevard intersection.

Source: Kittelson & Associates, 2014.

Impact TRAF-7I: The proposed project would cause the operations at the intersection of I-880 southbound ramps and Marina Boulevard (#14) to reduce from LOS D to LOS E in the AM peak hour, adding to the existing substandard operations to further reduce the level of service from LOS E to LOS F in the PM and Saturday peak hours and cause the volume-to-capacity (v/c) ratios to increase by 0.10 during both periods, which is higher than the 0.05 allowed by the City.

Mitigation Measure TRAF-7I: By modifying the signal to a two-phase operation, implementation of Mitigation Measure TRAF-7B.1 (described above) would improve the operations to LOS C in the AM and Saturday peak hours, and to LOS D in the PM peak hour.

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Significance After Mitigation: Significant and unavoidable. Implementation of Mitigation Measure TRAF-7I would lessen impacts related to I-880 southbound ramps and Marina Boulevard (#14) to a less-than-significant level. However, because this ramp intersection is under Caltrans' jurisdiction, the implementation and timing of the Mitigation Measures are not under the City's control. Therefore, this impact would remain significant and unavoidable. Implementing adaptive traffic signals as identified in the Kaiser Permanente San Leandro Medical Center/Mixed-Use Retail Development Project EIR may lessen the cumulative impacts. However, such implementation requires approval by Caltrans which has not yet been obtained. Therefore, this impact would remain *significant and unavoidable*.

As discussed above, the addition of traffic associated with implementation of the proposed Project would add to the existing substandard LOS F operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) and cause the v/c ratio to increase by 0.07 in the AM peak hour and 0.10 in the PM peak hour. In the absence of adequate mitigation a *significant* impact would result in this respect.

Impact TRAF-7J: The proposed Project would add to the Long-Term Cumulative No Project substandard LOS F operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) and cause the v/c ratio to increase by 0.07 in the AM peak hour and 0.10 in the PM peak hour.

Mitigation Measure TRAF-7J: Implementation of Mitigation Measures 7C.1 and 7C.2 would reduce the v/c ratios to a less-than-significant level.

Significance After Mitigation: Significant and unavoidable. Implementation of these Mitigation Measures would reduce the v/c ratios to a less-than-significant level. However, as indicated, the available right-of-way would not be sufficient to accommodate the necessary northbound travel and bike lanes. Therefore, the measure is considered infeasible and the cumulative impact would be *significant and unavoidable*.

As discussed above, the addition of traffic associated with development of the proposed Project would cause the level of service at the intersection of Aladdin Avenue and Teagarden Street (#27) to reduce from LOS D to LOS E in the PM peak hour. In the absence of adequate mitigation, a *significant* impact would result.

Impact TRAF-7K: The proposed Project would cause the level of service at the intersection of Aladdin Avenue and Teagarden Street (#27) to reduce from LOS D to LOS E in the PM peak hour.

Mitigation Measure TRAF-7K: Optimize the traffic signal cycle length at the intersection of Aladdin Avenue and Teagarden Street (#27). This traffic signal does not operate in coordination with any other signal; therefore, the cycle length can be adjusted without affecting other signals in the system.

Significance After Mitigation: Less than significant. Implementation of this Mitigation Measure would improve the operations at this intersection to LOS D in the PM peak hour, thereby reducing this impact to a *less-than-significant* level.

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Unsignalized Intersections

Similar to the **Near-Term Cumulative No Project** scenario, all unsignalized intersections are projected to operate at acceptable levels under **Long-Term Cumulative No Project** scenario; however, the Project-generated traffic would cause the same two all-way stop-controlled intersections to reduce to substandard levels. The Aurora Drive and Marina Boulevard intersection (#10) would operate at LOS F during AM and PM peak hours and LOS E during Saturday Midday peak hour and the Monarch Bay Drive and Mulford Point Drive intersection (#19) would reduce to LOS F during the PM peak hour with the addition of Project traffic.

As discussed above, the addition of traffic associated with development of the proposed Project would cause the level of service at the intersection of Aurora Drive and Marina Boulevard (#10) to reduce from LOS A to LOS F in the AM peak hour and from LOS B to LOS F in the PM peak hour. Saturday peak hour operations would reduce from LOS B to LOS E. In the absence of adequate mitigation, a *significant* impact would result.

Impact TRAF-7L : The proposed Project would cause the level of service at the intersection of Aurora Drive and Marina Boulevard (#10) to reduce from LOS A to LOS F in the AM peak hour and from LOS B to LOS F in the PM and Saturday peak hours.

Mitigation Measure TRAF-7L: Implementation of Mitigation Measure TRAF-1C, installing a mini-roundabout or a traffic signal, would lessen the impacts in the long term cumulative conditions to *less than significant*. The mini-roundabout would improve the operations to LOS A in the AM and PM peak hours and to LOS B in the Saturday peak hour. A traffic signal would improve the operation of this intersection to LOS B in the AM peak hour and LOS A in the PM and Saturday peak hours.

Significance After Mitigation: Less than significant.

As discussed above, the addition of Project traffic would cause the level of service at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) to reduce from LOS A to LOS F in the PM peak hour. In the absence of adequate mitigation, a *significant* impact would result.

Impact TRAF-7M: The proposed Project would cause the level of service at the intersection of Monarch Bay Drive and Mulford Point Drive (#19) to reduce from LOS A to LOS F in the PM peak hour.

Mitigation Measure TRAF-7M: Implement Mitigation Measure TRAF-1D by installing a roundabout at the intersection of Monarch Bay Drive and Mulford Point Drive (#19).

Significance After Mitigation: Less than significant. Implementation of Mitigation Measure TRAF-7M would improve the operations to LOS A in the PM peak hour and thereby reduce this impact to a *less-than-significant* level.

Long-Term Cumulative Freeway Operations

The weekday peak hour freeway operations are presented in Table 4.13-30 and the detailed calculation worksheets are provided in Appendix H. The same locations projected to operate unacceptably under

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Near Term Cumulative conditions would also experience substandard operations under Long Term Cumulative conditions.

TABLE 4.13-30 FREEWAY LEVEL OF SERVICE – LONG TERM CUMULATIVE CONDITIONS – AM AND PM PEAK HOUR

Location	Type	Long Term			Long Term + Project		
		Volume ^a	Density ^b	LOS ^c	Volume ^a	Density ^b	LOS ^c
AM PEAK HOUR							
I-880 Northbound							
Washington Ave to Marina Blvd	Mainline	8,172	29.1	D	8,323	29.8	D
Marina Blvd to Davis St	Mainline	8,538	37.8	E	8,547	37.9	E
	Weave ^d	1,707	N/A	C	1,715	N/A	C
Davis St to 98th Ave	Mainline	6,389	28.2	D	6,442	28.5	D
I-880 Southbound							
98th Ave to Davis St	Mainline	7,712	27.0	D	7,860	27.6	D
Davis St to Marina Blvd	Mainline	6,719	27.0	C	6,728	27.1	C
	Weave ^d	1,271	N/A	B	1,279	N/A	B
Marina Blvd to Washington Ave	Mainline	8,339	29.9	D	8,403	30.2	D
PM PEAK HOUR							
I-880 Northbound							
Washington Ave to Marina Blvd	Mainline	8,692	31.7	D	8,738	31.9	D
Marina Blvd to Davis St	Mainline	8,806	41.1	E	8,852	41.6	E
	Weave ^d	2,119	N/A	C	2,164	N/A	C
Davis St to 98th Ave	Mainline	7,166	33.2	D	7,259	33.8	D
I-880 Southbound							
98th Ave to Davis St	Mainline	7,063	24.3	C	7,141	24.6	C
Davis St to Marina Blvd	Mainline	9,317	41.6	E	9,363	42.1	E
	Weave ^d	1,686	N/A	B	1,731	N/A	B
Marina Blvd to Washington Ave	Mainline	8,205	29.2	D	8,347	29.9	D

a. Volume = vehicles per hour (vph)

b. Density = passenger car per mile per lane (pc/m/ln)

c. LOS = Level of Service

d. Marina Blvd. to Davis St. analyzed as a weaving section using the Leisch Method as described in the Caltrans Design Manual, May 7, 2012. The volume shown for this segment is the weaving volume.

Source: Kittelson & Associates, Inc., 2014.

I-880 northbound between Marina Boulevard and Davis Street in the AM and PM peak hours and I-880 southbound between Davis Street and Marina Boulevard in the PM peak hour would operate at LOS E under Long-Term Cumulative No Project scenario. The Project would add traffic equivalent to 0.1 percent of the freeway’s design capacity to the northbound segment in the AM peak hour and 0.5 percent to the same segment in the PM peak hour. It would also add traffic equivalent to 0.4 percent of the freeway’s

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design capacity to the southbound segment in the PM peak hour. Because the Project would not add traffic greater than one percent of the freeway segment's design capacity, the Project impacts are considered to be less than significant. All other study segments are projected to operate at LOS D or better.

UTILITIES AND SERVICE SYSTEMS

4.14 UTILITIES AND SERVICE SYSTEMS

This chapter describes the existing utilities and service systems for the Project site and evaluates the potential environmental consequences of implementing the Project. Water supply, wastewater, solid waste, and energy conservation are each addressed in separate sections of this chapter. In each section, a summary of the relevant regulatory settings and existing conditions is followed by a discussion of potential impacts and cumulative impacts from the implementation of the Project. Stormwater, as it relates to both water quality and capacity, is addressed in Chapter 4.8, Hydrology and Water Quality, of this Draft EIR.

4.14.1 WATER

This section outlines the regulatory setting, describes environmental setting, and discusses potential impacts from buildout of the Project with regard to local water supply, treatment, and distribution.

4.14.1.1 ENVIRONMENTAL SETTING

Regulatory Setting

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 it came into law. The Act authorizes the U.S. Environmental Protection Agency (EPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-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 State Department of Health Services conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

State Regulations

California Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, which was passed in California in 1969 and amended in 2013, the State Water Resources Control Board (SWRCB) has authority over State water rights and water quality policy. This Act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. San Leandro is overseen by the San Francisco Bay RWQCB.

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California Urban Water Management Planning Act

Through the Urban Water Management Planning Act of 1983, the California Water Code requires all urban water suppliers within California to prepare and adopt an Urban Water Management Plan (UWMP) 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-feet¹ of water annually. The Act is intended to support conservation and efficient use of urban water supplies at the local area. The Act 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.

California Senate Bills 610 and 221

The Senate Bill (SB) 610 and SB 221 amended State law to ensure better coordination between local water supply and land use decisions and confirm that there is an adequate water supply for new development. SB 610 is not applicable to General Plan Amendments that do not propose or authorize specific development projects. SB 221 only applies to residential subdivisions. Both statutes require that detailed information regarding water availability be provided to City of San Leandro decision-makers prior to approval of large development projects. SB 610 requires the preparation of a water supply assessment (WSA) for certain types of projects, as defined by Water Code Section 10912, which are subject to the California Environmental Quality Act (CEQA). Projects required to prepare a WSA are defined as follows:

- Residential development of more than 500 dwelling units.
- Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor area.
- Hotel or motel, or both, having more than 500 rooms.
- Industrial, manufacturing, or processing plant, or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- Mixed-use project that includes one or more of the projects specified above.
- Project that would demand an amount of water equivalent to, or greater than, the amount of water required for 500 dwelling units.

The SB 221 establishes consultation and analysis requirements related to water supply planning for residential subdivisions including more than 500 dwelling units. The water supplier must provide written verification that sufficient water is available for the project before construction begins. Compliance with both SB 610 and SB 221 involves review of the Urban Water Management Plan (UWMP).

¹ Once acre-foot is the amount of water required to cover 1 acre of ground (43,560 square feet) to a depth of 1 foot.

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The Water Conservation Act of 2009 (Senate Bill X7-7)

The Water Conservation Act of 2009², SB X7-7, requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans. The SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards, it also requires agricultural water suppliers prepare plans and implement efficient water management practices.

Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881)

The Water Conservation in Landscaping Act of 2006 (Assembly Bill (AB) 1881) required the State Department of Water Resources to update the State Model Water Efficient Landscape Ordinance (WELO) by 2009. The State's model ordinance was issued on October 8, 2009. Under AB 1881, cities and counties are required to adopt a state updated model landscape water conservation ordinance by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance (MO). In accordance with AB 1881, San Leandro has adopted its Landscape Ordinance on January 19, 2010. The ordinance has been in effect since February 1, 2010. See City of San Leandro Municipal Code below for a discussion of local ordinances that reduce water consumption and conserve water.

CALGreen Building Code (Part 11, Title 24, CCR)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations [CCR]) to apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in the code, throughout the State of California. CALGreen established planning and design standards for sustainable site development including water conservation and requires new buildings to reduce water consumption by 20 percent. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011. The building efficiency standards are enforced through the local building permit process.

The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation

² Department of Water Resources, Senate Bill SBX7-7 2009 Information, <http://www.water.ca.gov/wateruseefficiency/sb7/>, accessed July 28, 2014.

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- Material conservation and resource efficiency
- Environmental quality

The California Plumbing Code (Part 5, Title 24, CCR)

The 2010 California Plumbing Code (Part 5, Title 24, CCR) was adopted as part of the California Building Standards Code. The general purpose of the universal code is to prevent disorder in the industry as a result of widely divergent plumbing practices and the use of many different, often conflicting, plumbing codes by local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. Water supply and distribution shall comply with all applicable provisions of the current edition of the California Plumbing Code.

Local Regulations

2010 Urban Water Management Plan

In compliance with the SB X7-7 and the Urban Water Management Planning Act, the water service provider for San Leandro - East Bay Municipal Utilities District (EBMUD) - adopted its 2010 UWMP in June 2011.

San Leandro General Plan

The City of San Leandro's General Plan was adopted by the San Leandro City Council in May 2002 and updated in 2011 to include the updated Housing Element. The General Plan includes goal, policies, actions, and implementation strategies with regards to conserving water and reducing water usage, as summarized in Table 4.14-1.

City of San Leandro Municipal Code

The City of San Leandro Municipal Code is a primary tool that shapes the form and character of physical development in San Leandro. The Municipal Code identifies site development regulations, and other general provisions that ensure consistency between the General Plan and proposed development projects. The Municipal Code is organized by Title, Chapter, Article and Section. The current Municipal Code is up to date through Ordinance 2014-006 and the June 2014 code supplement. The following provisions from the Municipal Code help conserve water resources in San Leandro.

- Chapter 3-19, The City's Green Building Ordinance, requires a minimum Leadership in Energy & Environmental Design (LEED) rating of "Silver" for construction projects valued at over \$3 million on City-owned facilities. (LEED is a rating system created by the U.S. Green Building Council that ranks different levels of design and construction aimed at improving building energy efficiency, water conservation and sustainable resource use.) The ordinance promotes healthy and efficient City facilities through design, construction and operation, and helps the City reduce its energy consumption and carbon emissions. Green buildings use recycled-content materials, consume less energy and water, have better indoor air quality, and use fewer natural resources than conventional buildings. The chapter finds that the most immediate and meaningful way to advance this cause is to include green building elements in City projects, and to encourage private projects to include green building elements.

UTILITIES AND SERVICE SYSTEMS

TABLE 4.14-1 WATER-RELATED GOALS AND POLICIES OF THE SAN LEANDRO GENERAL PLAN

Goal/Policy Number	Goals, Policies, and Actions Text	Implementation Strategies
Chapter 5, Open Space, Parks and Conservation		
Goal 27	Resource Conservation. Promote recycling, water conservation, and other programs which create a more sustainable environment.	
Policy 27.02	<p>WATER CONSERVATION Promote the efficient use of existing water supplies through a variety of water conservation measures, including the use of recycled water for landscaping.</p> <p>Action 27.02-A: Urban Water Management Plan <i>Take the actions necessary to implement EBMUD’s Urban Water Management Plan at the local level.</i></p> <p>Action 27.02-B: Recycled Water use on Golf Courses <i>Coordinate with the Regional Water Quality Control Board, EBMUD, and other agencies to implement plans for recycled water delivery to Marina Park, the Monarch Bay (Tony Lema and Marina) Golf Courses, and other landscaped public areas in San Leandro.</i></p>	<p>Capital Improvement Program</p> <p>Intergovernmental Coordination</p> <p>Public Education and Outreach Programs</p>
Policy 27.03	<p>DROUGHT-TOLERANT LANDSCAPING Encourage the use of native vegetation and drought tolerant non-native vegetation in landscaping plans.</p>	Water Conserving Landscape Ordinance
Policy 27.04	<p>DEVELOPMENT STANDARDS Maintain local planning and building standards that encourage the efficient use of water through such measures as low-flow plumbing fixtures and water-saving appliances. Require water conservation measures as a condition of approval for major developments.</p>	<p>Building Code</p> <p>Conditional Use Permits</p> <p>Development Review</p>
Policy 27.05	<p>CITY CONSERVATION PRACTICES Ensure that City itself follows conservation practices in its day-to-day operations and is a role model for businesses and residents in the area of conservation. The City should encourage the use of reusable and recyclable goods in its purchasing policies and practices, and should develop strategies that encourage residents and businesses to do the same.</p> <p>Action 27.05-A: Community Conservation Events <i>Promote community events and fairs that increase environmental awareness, such as Arbor Day tree planting, Earth Day activities, shoreline clean-ups, and creek restoration.</i></p> <p>Action 27.05-B: Recycling Incentives <i>Explore incentive programs to promote recycling, including awards or monetary bonuses for exemplary recycling customers.</i></p>	<p>City Operating Procedures</p> <p>Public Education and Outreach Programs</p>
Chapter 8, Community Services and Facilities		
Goal 52	Infrastructure. Ensure that local water, sewer, storm drainage, and solid waste facilities are well maintained; improvements meet existing and future needs; and land use decisions are contingent on the adequacy and maintenance of such facilities.	
Policy 52-01	<p>DEVELOPMENT IMPACTS Permit new development only when infrastructure and utilities can be provided to that development without diminishing the quality of service provided to the rest of the City.</p>	<p>Capital Improvement Program</p> <p>Development Review</p>

UTILITIES AND SERVICE SYSTEMS

TABLE 4.14-1 WATER-RELATED GOALS AND POLICIES OF THE SAN LEANDRO GENERAL PLAN

Goal/Policy Number	Goals, Policies, and Actions Text	Implementation Strategies
Policy 52-02	<p>FAIR SHARE COSTS</p> <p>Require future development to pay its fair share of the cost of improving the water, sewer, drainage, and other infrastructure systems needed to serve that development. Use fees and other appropriate forms of mitigation to cover the costs of upgrading public infrastructure.</p> <p>Action 52.02-A: Infrastructure Impact Fee and Rate Updates <i>Regularly update fees and rates for sewer, solid waste, and other public services to ensure that revenues are sufficient to cover operating and maintenance costs.</i></p>	<p>Development Review</p> <p>Impact/In-Lieu Fees</p>
Policy 52-03	<p>COORDINATION</p> <p>Coordinate local infrastructure planning with EBMUD, the Oro Loma Sanitary District, Alameda County, and other service providers to ensure that infrastructure remains adequate to serve existing and planned development.</p>	<p>Intergovernmental Coordination</p>

Source: City of San Leandro 2002-2015 General Plan.

- Chapter 3-22, Bay Friendly Landscaping Requirements for City Projects, requires the integration of Bay-friendly landscaping strategies in City landscapes and landscapes that are part of public-private partnership projects. Bay Friendly Landscaping Requirements means the most recent version of guidelines developed by StopWaste³ for use in the professional design, construction, and maintenance of Landscapes. City staff shall maintain the most recent version of the Bay-friendly Guidelines at all times. In Alameda County, StopWaste has taken the lead in defining and promoting environmentally friendly landscaping for the commercial, institutional, and residential sectors by developing the Bay-friendly Landscape Guidelines for professional landscapers and the Bay-friendly Gardening Guide for residents. This Chapter finds that requiring City projects and public-private partnership projects to incorporate Bay-Friendly Landscape Guidelines is necessary and appropriate to achieving the benefits of sustainable landscaping in the City.
- Section 7-9-505, Floodplain Management - Standards for Utilities, prescribes that all new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate: (1) Infiltration of flood waters into the systems; and (2) Discharge from the systems into floodwaters.

City of San Leandro Zoning Code

In addition to the General Plan and other provisions of the Municipal Code, the City of San Leandro Zoning Code also is a primary tool that shapes the form and character of physical development in San Leandro. The Zoning Code is comprised of regulations, known as zoning regulations, establishing various classes of zoning districts governing the use of land and the placement of buildings and improvements within districts. The following provision from the Zoning Code helps conserve water resources in San Leandro.

- Article 19, Landscape Requirements, is intended to implement the new landscape design requirements of the Water Conservation in Landscaping Act of 2006 (AB 1881) and to establish standards for sustainable landscape practices in accordance with the current version of the StopWaste

³ StopWaste is the Alameda County Waste Management Authority and the Alameda County Source Reduction and Recycling Board operating as one public agency. <http://www.stopwaste.org/home/index.asp?page=2>.

UTILITIES AND SERVICE SYSTEMS

Bay Friendly Landscape protocols. In recognition of the importance landscaping has in improving the quality of San Leandro's environment, and that landscape design, installation, maintenance and management must be water efficient and sustainable, this Article establishes procedures to insure that landscaping is installed and maintained in accordance with the requirements of this Code.

Existing Conditions

Water Supply and Infrastructure

Water service in San Leandro, including the Project site, is provided by East Bay Municipal Utility District (EBMUD), a publicly owned utility. Based on 2010 census data, approximately 1.34 million people are served by EBMUD's water system in a 332-square-mile area extending from Crockett on the north, southward to San Lorenzo (encompassing the major cities of Oakland and Berkeley), eastward from San Francisco Bay to Walnut Creek, and south through the San Ramon Valley.

Based on historical averages, about 90 percent of the EBMUD water supply originates from the Mokelumne River watershed, which is fed primarily from the melting snowpack of the Sierra Nevada, with the remaining ten percent coming from protected watershed lands and reservoirs in the East Bay Hills.⁴

EBMUD has water rights that allow for delivery of up to a maximum of 325 million gallons per day (mgd) from the Mokelumne River, subject to the availability of Mokelumne River runoff and to the senior water rights of other users, downstream fishery flow requirements, and other Mokelumne River water uses. Conditions that could, depending on hydrology, restrict EBMUD's ability to receive its full entitlement include:

- Upstream water use by prior right holders;
- Downstream water use by riparian and senior appropriators and other downstream obligations, including protection of public trust resources; and
- Variability in rainfall and runoff.

During prolonged droughts, the Mokelumne River supply cannot meet EBMUD's projected customer demands. To address this, EBMUD has completed construction of the Freeport Regional Water Facility⁵ and the Bayside Groundwater Facility,⁶ which are also discussed below in the EBMUD Water Supply Planning section of this assessment. EBMUD has obtained and continues to seek supplemental supplies.

The Mokelumne Aqueducts convey the Mokelumne River supply from Pardee Reservoir across the Sacramento-San Joaquin River Delta (Delta) to local storage and treatment facilities. The Mokelumne

⁴ East Bay Municipal Utilities District (EBMUD), 2011. Urban Water Management Plan 2010, June.

⁵ The Freeport Regional Water Facility became operational in February 2011. EBMUD's ability to take delivery of water through the Freeport facility is based on its Long Term Renewal Contract (LTRC) with the U.S. Bureau of Reclamation. The LTRC provides for up to 133,000 acre feet in a single dry-year, not to exceed a total of 165,000 acre feet in three consecutive dry years. Under the LTRC, the Central Valley Project (CVP) supply is available to EBMUD only in dry years when EBMUD's total stored water supply is forecast to be below 500,000 total acre feet on September 30 of each year.

⁶ Construction of the Bayside Groundwater Project, Phase 1, was completed in 2010. The project is designed to yield 2 million gallons per day (mgd) over a 6-month period, resulting in an average annual production capacity of 1 mgd per year.

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Aqueducts terminate in Walnut Creek, from where the water is sent directly to EBMUD's three in-line filtration water treatment plants (WTPs) or to one or more of the EBMUD terminal reservoirs. After treatment, water is distributed to 20 incorporated cities and 15 unincorporated communities in Contra Costa and Alameda counties.

After the WTPs, water is distributed throughout EBMUD's service area, which is divided into more than 120 pressure zones ranging in elevation from sea level to 1,450 feet. Approximately 50 percent of treated water is distributed to customers by gravity. The water distribution network includes 4,100 miles of pipe, 140 pumping plants and 170 neighborhood reservoirs (tanks storing treated drinking water) having a total capacity of 830 million gallons. EBMUD operates and maintains all treatment, storage, pumping, and distribution facilities within its service area and is responsible for all facilities up to the location of the water meter.

There are no major water storage facilities in San Leandro; the City is served by nearby facilities in Castro Valley and Oakland, including the Dunsmuir Reservoir just outside the northeastern City limits. Pipelines in San Leandro range from 4 to 36 inches in diameter.

Within the Project site, the San Leandro Marina is serviced by an 8-inch domestic water main running under Monarch Bay Drive. This main intersects a 12-inch water main running down Fairway Drive, an 8-inch main running under Neptune Drive and a 6-inch main running under Marina Boulevard. An 8-inch service line exists under Mulford Point Drive and a 6-inch service line exists under Pescador Point Drive. The existing library facility is serviced by a 6-inch line under Aurora Drive.

Water Supply Planning

EBMUD's Board of Directors adopted the 2010 UWMP on June 28, 2011, by Resolution No. 33832-11. The UWMP is a long-range planning document used to assess current and projected water usage, water supply planning and conservation and recycling efforts. As discussed under the Drought Management Program section in Chapter 3 of the 2010 UWMP, EBMUD's system storage generally allows it to continue serving its customers during dry-year events. EBMUD imposes rationing based on the projected storage available at the end of September. By imposing rationing in the first dry year of potential drought periods, EBMUD attempts to minimize rationing in subsequent years if a drought persists while continuing to meet its current and subsequent-year fishery flow release requirements and obligations to downstream agencies.

Year 1 of "Multiple Dry Water Years" is determined to be a year that EBMUD would implement Drought Management Program elements at the "moderate" stage with the goal of achieving a reduction between 0 to 10 percent in customer demand. Year 2 of "Multiple Dry Years" is determined to be a year that EBMUD would implement Drought Management Program elements at the "severe" stage with the goal of achieving between 10 to 15 percent reduction in customer demand. Year 3 of "Multiple Dry Years" is a year in which EBMUD would implement Drought Management Program elements at the "critical" stage. Despite water savings from EBMUD's aggressive conservation and recycling programs and rationing of up to 15 percent, additional supplemental supplies beyond those provided through the Freeport Regional Water Facility and the Bayside Groundwater Facility will be needed during Years 2 and 3 of a three-year drought. Therefore, supplemental supplies are needed in multiple-year drought periods while continuing to meet the requirements of senior downstream water right holders.

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Chapter 2 of the 2010 UWMP also lists other potential supplemental water projects, including northern California water transfers, Bayside Groundwater Project Expansion, Los Vaqueros Expansion and others that could be implemented as necessary to meet the projected long-term water supplemental need during multi-year drought periods. The 2010 UWMP identifies a broad mix of projects, with inherent scalability and the ability to adjust implementation schedules for a particular component, so that EBMUD will be able to continue to pursue the additional supplemental supplies that are projected to be necessary, while also minimizing the risks associated with future uncertainties such as project implementation challenges and global climate change. The Environmental Impact Report that EBMUD certified for the Water Supply Management Program 2040 examined the impacts of pursuing these supplemental supply projects at a program level. Separate project-level environmental documentation will be prepared, as appropriate, for specific components as they are developed in further detail and implemented in accordance with EBMUD's water supply needs.

In addition to pursuing supplemental water supply sources, EBMUD also maximizes resources through continuous improvements in the delivery and transmission of available water supplies, and investments in ensuring the safety of its existing water supply facilities. These programs, along with emergency interties and planned water recycling and conservation efforts, would ensure a reliable water supply to meet projected demands for current and future EBMUD customers within the current service area.

4.14.1.2 STANDARDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, the Project would have a significant impact on water service if:

1. There were insufficient water supplies available to serve the project from existing entitlements and resources, or if new or expanded entitlements were needed.
2. It would require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.

4.14.1.3 IMPACT DISCUSSION

UTIL-1	The Project would have sufficient water supplies available to the serve the Project from existing entitlements and resources, and would not require new or expanded entitlements.
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The City submitted a water supply assessment (WSA) for the Project to EBMUD, and requested the utility's consultation and review, by letter dated April 16, 2014.⁷ In its letter, the City estimated that the Project would generate up to 115,800 gallons per day of water demand [see Appendix I].

⁷ City of San Leandro, 2014. Letter from Sally Barros, Principal Planner, City of San Leandro, to David J. Rehnstrom, EBMUD, dated April 16, 2014, regarding City of San Leandro Shoreline Development Project, Request for Water Consultation and Review of Water Supply Assessment.

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EBMUD responded by letter⁸, dated May 13, 2014, and indicated that pursuant to Sections 10910-10915 of the California Water Code (SB-610), the project meets the threshold requirement for an assessment of water supply availability based on the amount of water this project would require, a mixed-use project that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project (see Appendix I). According to EBMUD, historical water use of the Project site excluding structures that are to remain is approximately 30,000 gallons per day (gpd). EBMUD estimated the project water demand would be approximately 130,000 gpd at build out, indicating the project would increase water demand by 100,000 gpd.

EBMUD's May 13, 2014 Water Supply Assessment letter stated "[T]he water demand for the City of San Leandro Shoreline Development Project is accounted for in EBMUD's water demand projections as published in EBMUD's 2010 Urban Water Management Plan."

Since the 1970s, water demand within EBMUD's service area has ranged from 200 to 220 mgd in non-drought years. The 2040 water demand forecast of 312 mgd for EBMUD's service area can be reduced to 230 mgd with the successful implementation of water recycling and conservation programs, as outlined in the 2010 UWMP. Although current demand is lower than estimated in the demand study in the UWMP, as a result of the recent multi-year drought and the downturn in the economy, the UWMP still reflects a reasonable expectation for growth over the long term for demand in year 2040.

The EBMUD's May 13, 2014 Water Supply Assessment letter stated "[T]he City of San Leandro Shoreline Development Project will not change EBMUD's 2040 demand projection."

In summary, build out of the Project would not result in insufficient water supplies from EBMUD under normal year conditions. In addition, during single-dry year and multiple-dry years, with the proposed and existing water conservation regulations and measures in place, and with EBMUD's supplemental supply plans, build out of the Project would not result in a significant impact on water supply from EBMUD, and new or expanded entitlements would not be needed. Thus, in accordance with applicable regulations listed below, impacts would be *less than significant*.

Applicable Regulations:

- The Water Conservation Act of 2009 (SB X7-7)
- 2010 California Plumbing Code that requires water conserving fixtures
- City of San Leandro's Landscaping Ordinance – Municipal Code Chapter 3-22
- City of San Leandro's Green Building Ordinance – Municipal Code Chapter 3-19
- City of San Leandro's Landscape Requirements – Zoning Code Article 19
- EBMUD's water supply and demand management strategies and drought management plans identified in the UWMP
- City of San Leandro General Plan

Significance Before Mitigation: Less than significant.

⁸ East Bay Municipal Utilities District (EBMUD), 2014. Letter from William R. Kirkpatrick, Manager of Water Distribution and Planning Division, EBMUD, to Sally Barros, Principal Planner, City of San Leandro, dated May 13, 2014, regarding Water Supply Assessment – City of San Leandro Shoreline Development Project.

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UTIL-2 The Project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.

As discussed in Impact UTIL-1 above, the water demand associated with the Project would be served with available and planned water supplies provided by EBMUD.

The Project would continue to be provided with water services from the EBMUD. In general, existing infrastructure would be preserved in place. However, extensions and/or additions to water pipes would be installed to provide water service to structures proposed by the Project. For example, there would be construction of a new water line within the proposed new right-of-way (ROW) for Mulford Point Drive, which would be re-aligned at the Monarch Bay Drive intersection. The majority of the development will be along Mulford Point Drive and at the north end of Monarch Bay Drive. If the existing 8-inch mains in this area are insufficient in size to provide necessary fire protection demand to the additional buildings, for example, then larger lines would be added as part of the Project.

Although creation of new or extended water distribution pipes could create short-term construction-related environmental effects (e.g., noise, dust, traffic, temporary service interruption, etc.), the work would be done in street ROW and subject to compliance with the City's regulations and standard conditions for new construction related to water lines, including the EBMUD's requirements for construction projects.⁹ For example, these regulations and conditions would require the water line construction to include best management practices that require construction to water the construction areas to minimize dust generation, limit construction noise to daytime hours to limit impacts to sensitive receptors, and use modern equipment to limit emissions. In addition, General Plan policies regarding infrastructure and development impacts, as discussed below, would further ensure any potential adverse physical effects of these activities are less than significant.

General Plan Policy 52.01 (cited above) mandates that development shall not be approved until it is demonstrated that infrastructure can be provided without diminishing citywide service levels. Other policies (e.g., Policy 52.02 - Fair Share Cost; Policy 52.03 – Coordination; and Action 52.02-A - Infrastructure Impact Fee and Rate Updates) ensure that development pays its fair share for needed improvements to the water distribution system. Implementation of these policies will ensure the impact of expanding or extending water distribution lines is less than significant.

In summary, in accordance with the discussion under Impact UTIL-1, and applicable regulations below, buildout of the Project would not result in water demands that would require the construction of new water treatment facilities or the significant expansion of existing facilities, the construction of which would cause significant environmental effects; thus, impacts would be *less than significant*.

⁹ EBMUD.2014. New water service regulations. <https://www.ebmud.com/customers/new-service-installations/new-water-service-regulations>. Accessed October 2, 2014.

UTILITIES AND SERVICE SYSTEMS

Applicable Regulations:

- The Water Conservation Act of 2009 (SB X7-7)
- 2010 California Plumbing Code that requires water conserving fixtures
- City of San Leandro's Landscaping Ordinance – Municipal Code Chapter 3-22
- City of San Leandro's Green Building Ordinance – Municipal Code Chapter 3-19
- City of San Leandro's Landscape Requirements – Zoning Code Article 19
- EBMUD's water supply and demand management strategies and drought management plans identified in the UWMP
- City of San Leandro General Plan – Infrastructure Policies 52-01 (Development Impacts); 52-02 (Fair Share Costs); 52-03 (Coordination)

Significance Before Mitigation: Less than significant.

4.14.1.4 CUMULATIVE IMPACT DISCUSSION

UTIL-3	The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to water service.
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This section analyzes potential impacts to water supply that could occur from the Project in combination with other reasonably foreseeable projects in the surrounding area. The geographic scope of this cumulative analysis is the EBMUD service area. While the Project would contribute to an increased cumulative demand for water supply, the increased demand would not exceed the long-term supply under normal circumstances, as discussed above. Additionally, EBMUD's UWMP determined that the water supply will be sufficient to accommodate future demand in the EBMUD service areas through 2040, under normal circumstances. In the multiple dry years, with EBMUD drought contingency plans in place, any shortages would be managed through demand reductions and other measures such as increased supplemental supplies. In addition, with SB X7-7 and the State, county, and local water conservation ordinances in place, all jurisdictions would be required to conserve water use through establishing water efficiency measures. In addition, the General Plan includes policies and strategies that would ensure adequate water supplies are available for the residents of San Leandro. General Plan Policy 27-02, Water Conservation, promotes the efficient use of existing water supplies through a variety of water conservation measures, including the use of recycled water for landscaping. Action 27.02-A, Urban Water Management Plan, calls for taking actions necessary to implement EBMUD's Urban Water Management Plan at the local level. Action 27.02-B, Recycled Water, calls for use of recycled water on Golf Courses. In addition, pursuant to SB 610 and SB 221, Water supply assessments (WSAs) would be prepared for large development projects prior to approval of each project to ensure adequate water supply for new development. Together, these regulations, policies, and other considerations would ensure that cumulative impacts with respect to water supply would be less than significant.

Applicable Regulations:

- The Water Conservation Act of 2009 (SB X7-7)
- 2010 California Plumbing Code that requires water conserving fixtures
- State Updated Model Water Efficient Landscape Ordinance (AB 1881 [2006])

UTILITIES AND SERVICE SYSTEMS

- EBMUD's water supply and demand management strategies and drought management plans identified in the UWMP

Overall, cumulative water demands would neither exceed planned levels of supply nor require building new water treatment facilities or expanding existing facilities beyond what is currently planned. In addition, future development would be required to pay development fees, which would offset the costs of system maintenance and capital upgrades to support the new development in the EBMUD service area. Therefore, the cumulative impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

4.14.2 SANITARY WASTEWATER SERVICE (SEWER)

This section describes the existing conditions and potential impacts of the Project with regard to wastewater collection and treatment facilities.

4.14.2.1 ENVIRONMENTAL SETTING

Regulatory Setting

Federal Regulations

The federal government regulates wastewater treatment and planning through the Federal Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), as well as through the National Pollutant Discharge Elimination System (NPDES) permit program, both of which are discussed in further detail below.

Clean Water Act

The Federal Water Pollution Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharge of pollutants into watersheds throughout the nation. It is the primary federal law governing water pollution. Under the CWA, the EPA implements pollution control programs and sets wastewater standards. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the Clean Water Act 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 connections 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.

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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 sewage treatment plant. The Alameda County permittees include Alameda County, the Alameda County Flood Control and Water Conservation District, and 14 cities, including San Leandro.

State Regulations

State Water Resources Control Board

On May 2, 2006 the State Water Resources Control Board (SWRCB) adopted a General Waste Discharge Requirement (Order No. 2006-0003) 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 (SSOs) 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 Sanitary Sewer Master Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to nine Regional Water Quality Control Boards (RWQCBs) to enforce these requirements within their region. The San Francisco Bay RWQCB issues and enforces NPDES permits in San Leandro. NPDES permits allow the RWQCB to regulate where and how the waste is disposed, including the discharge volume and effluent limits of the 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. The Act was amended in 1949 to allow the districts to also provide solid waste management and disposal services, including refuse transfer and resource recovery.

Local Regulations

San Leandro Sewer System Management Plan

The City of San Leandro has developed a Sewer System Management Plan (SSMP) to properly manage, operate, and maintain all parts of the City's sanitary sewer collection system and to satisfy the requirements of the State Water Resources Control Board Order #2006-0003. The Sewer System Management Plan (SSMP) was prepared in compliance with the State Water Resources Control Board (SWRCB) Order 2006-0003: Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (GWDR), as revised by Order No. WQ 2008-0002.EXEC on February 20, 2008. The GWDR prohibits sanitary sewer overflows (SSOs), requires reporting of SSOs using the statewide electronic reporting system, and requires the preparation of an SSMP.

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The SSMP is also required by the San Francisco Bay RWQCB. Requirements are outlined in the Sewer System Management Plan Development Guide dated July 2005 by the RWQCB in cooperation with the Bay Area Clean Water Agencies (BACWA).

City of San Leandro General Plan

The General Plan includes goal, policies, actions, and implementation strategies with regard to wastewater collection, treatment, and recycling, as summarized in Table 4.14-2.

City of San Leandro Municipal Code

The City of San Leandro Municipal Code dictates how a sanitary sewer system is constructed. Section 7-9-505(a) Standards for Utilities states that all new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into floodwaters.

The City of San Leandro Municipal Code is a primary tool that shapes the form and character of physical development in San Leandro. The Municipal Code identifies site development regulations, and other general provisions that ensure consistency between the General Plan and proposed development projects. The Municipal Code is organized by Title, Chapter, Article, and Section. The current Municipal Code is up to date through Ordinance 2014-006 and the June 2014 code supplement. The following provision from the Municipal Code helps conserve water resources and wastewater collection and treatment capacity in San Leandro.

- Section 7-9-505, Floodplain Management – Standards for Utilities, prescribes that all new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate: 1) infiltration of flood waters into the systems; and 2) discharge from the systems into floodwaters.

Existing Conditions

This section describes the environmental setting and potential impacts of the Project with regard to wastewater collection and treatment facilities.

The City of San Leandro Water Pollution Control Division is responsible for the regulation, collection, treatment and disposal of wastewater from all residential and commercial sources within the City's sewer service area. The City Water Pollution Control Division provides operation and maintenance of a Water Pollution Control Plant, 130 miles of pipeline from four to 33 inches in diameter, and 13 remote sewage lift stations.

Wastewater from the Project site is collected and treated by the City-owned and operated system. Wastewater from the Project site is piped to and treated by the City Water Pollution Control Plant, which is located at the west end of Davis Street (3000 Davis Street, San Leandro).

UTILITIES AND SERVICE SYSTEMS

TABLE 4.14-2 WASTEWATER-RELATED GOALS AND POLICIES OF THE SAN LEANDRO GENERAL PLAN

Goal /Policy Number	Goals, Policies, and Actions	Implementation Strategies
Chapter 5, Open Space, Parks and Conservation		
Goal 27	Resource Conservation. Promote recycling, water conservation, and other programs which create a more sustainable environment.	
Policy 27.02	<p>WATER CONSERVATION Promote the efficient use of existing water supplies through a variety of water conservation measures, including the use of recycled water for landscaping.</p> <p>Action 27.02-A: Urban Water Management Plan <i>Take the actions necessary to implement EBMUD’s Urban Water Management Plan at the local level.</i></p> <p>Action 27.02-B: Recycled Water use on Golf Courses <i>Coordinate with the Regional Water Quality Control Board, EBMUD, and other agencies to implement plans for recycled water delivery to Marina Park, the Monarch Bay (Tony Lema and Marina) Golf Courses, and other landscaped public areas in San Leandro.</i></p>	<p>Capital Improvement Program</p> <p>Intergovernmental Coordination</p> <p>Public Education and Outreach Programs</p>
Policy 27.05	<p>CITY CONSERVATION PRACTICES Ensure that City itself follows conservation practices in its day-to-day operations and is a role model for businesses and residents in the area of conservation. The City should encourage the use of reusable and recyclable goods in its purchasing policies and practices, and should develop strategies that encourage residents and businesses to do the same.</p> <p>Action 27.05-A: Community Conservation Events <i>Promote community events and fairs that increase environmental awareness, such as Arbor Day tree planting, Earth Day activities, shoreline clean-ups, and creek restoration.</i></p> <p>Action 27.05-B: Recycling Incentives <i>Explore incentive programs to promote recycling, including awards or monetary bonuses for exemplary recycling customers.</i></p>	<p>City Operating Procedures</p> <p>Public Education and Outreach Programs</p>
Chapter 8, Community Services and Facilities		
Goal 52	Infrastructure. Ensure that local water, sewer, storm drainage, and solid waste facilities are well maintained; improvements meet existing and future needs; and land use decisions are contingent on the adequacy and maintenance of such facilities.	
Policy 52-01	<p>DEVELOPMENT IMPACTS. Permit new development only when infrastructure and utilities can be provided to that development without diminishing the quality of service provided to the rest of the City.</p>	<p>Capital Improvement Program</p> <p>Development Review</p>
Policy 52-02	<p>FAIR SHARE COSTS Require future development to pay its fair share of the cost of improving the water, sewer, drainage, and other infrastructure systems needed to serve that development. Use fees and other appropriate forms of mitigation to cover the costs of upgrading public infrastructure.</p> <p>Action 52.02-A: Infrastructure Impact Fee and Rate Updates <i>Regularly update fees and rates for sewer, solid waste, and other public services to ensure that revenues are sufficient to cover operating and maintenance costs.</i></p>	<p>Development Review</p> <p>Impact/In-Lieu Fees</p>
Policy 52-03	<p>COORDINATION Coordinate local infrastructure planning with EBMUD, the Oro Loma Sanitary District, Alameda County, and other service providers to ensure that infrastructure remains adequate to serve existing and planned</p>	<p>Intergovernmental Coordination</p>

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TABLE 4.14-2 WASTEWATER-RELATED GOALS AND POLICIES OF THE SAN LEANDRO GENERAL PLAN

Goal /Policy Number	Goals, Policies, and Actions	Implementation Strategies
	development.	
Policy 52-04	<p>WASTEWATER COLLECTION AND TREATMENT</p> <p>Maintain efficient, environmentally sound, and cost-effective wastewater collection and treatment services in San Leandro.</p> <p>Action 52.04-A: Infiltration/Inflow Capital Improvements <i>Continue improvements to the City’s wastewater collection system to correct infiltration and inflow problems. Ensure that high operating efficiency is retained in both the wastewater collection and treatment systems.</i></p>	Capital Improvement Program
Policy 52-05	<p>CAPACITY</p> <p>Maintain adequate capacity at the San Leandro wastewater treatment plant to accommodate projected levels of growth within the service area and encourage the Oro Loma Sanitary District to do the same. Support efforts to maintain and/or improve the high quality of treated effluent at both plants and increase the feasibility and cost-effectiveness of using recycled wastewater for non-potable purposes.</p>	<p>Capital Improvement Program</p> <p>Intergovernmental Coordination</p>

Source: City of San Leandro 2002-2015 General Plan.

The City’s Water Pollution Control Plant cleans about five million gallons of wastewater a day, with peak flows up to 23 million gallons per day during wet weather flow. The facility provides “secondary” wastewater treatment through physical, biological, and chemical processes. Treated effluent (water) is safely disposed of through a collectively owned¹⁰ discharge pipe into the deep waters of the San Francisco Bay.

The City has developed a Sewer System Management Plan (SSMP) to properly manage, operate, and maintain all parts of the City’s sanitary sewer collection system and to satisfy the requirements of the State Water Resources Control Board Order #2006-0003.¹¹ In 2011 the Water Pollution Control Division began a major rehabilitation of the treatment plant. Many of the plant’s facilities were 60 years old and in need of repair or replacement. Project Goals include: 1) protect public health and the environment; 2) avoid costly emergency repairs to infrastructure; 3) expand operational options to improve efficiency; and 4) add redundancy to improve safety and reliability.

The City is responsible for: 1) operating and maintaining local sewer lines; 2) protecting City property and streets, the local storm drain system, and other public areas; and 3) collecting, treating, and disposing of wastewater.

A property owner’s sewer pipes are called service laterals and run from the connection at the home to the connection with the public sewer. Maintenance and repair of service laterals are the responsibility of the property owner.

¹⁰ East Bay Dischargers Authority is a Joint Powers Agency consisting of five local agencies, including the City of San Leandro.

¹¹ City of San Leandro Sewer Information, <https://www.sanleandro.org/depts/pw/wpcp/sewer.asp>, accessed July 29, 2014.

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Within the vicinity of the Project site, a 6-inch gravity sanitary system serves the west end of the Mulford Point Drive peninsula that drains the Marina office, a restroom building, a boater sewage pump-out facility, and the former Blue Dolphin Restaurant. The system drains to the “Blue Dolphin” lift station located just northeast of the former Blue Dolphin Restaurant. Sewage from the lift station is pumped via a 4-inch force main into another gravity system in Mulford Point Drive located about 300 feet east of the lift station.

The rest of the Project site is served via a gravity sewer system consisting of 6-inch and 8-inch pipes located under Mulford Point Drive and Pescador Point Drive, and near Monarch Bay Drive. This system serves Horatio’s restaurant, El Torito restaurant, the San Leandro Yacht Club, Marina Inn, and the Spinnaker Yacht Club. These systems converge at a manhole near the intersection of Monarch Bay Drive and Mulford Point Drive. Beyond this manhole, an 8-inch gravity line runs north under the Marina 9-hole Golf Course until it terminates at the Neptune lift station near the intersection of Marina Boulevard and Neptune Drive. The pump station has three pumps rated at 900 gallons per minute (gpm) each, with 2,000 gpm capacity at max output, and pumps sewage via a 12-inch force main under Marina Boulevard to Nome Street and then via gravity to a main sewer interceptor in Doolittle Drive.¹²

There is also a six-inch gravity system line under Fairway Drive that drains sewage to the east towards Aurora Drive, and then gravity feeds down the eight-inch line on Aurora Drive and then to the Neptune Lift Station. This line will likely service the proposed residential housing development on the south portion of the Marina Golf Course as well as the new library/community center; the existing library is already connected to it.

Unrelated to the systems described above, there is a 48-inch force main system owned by East Bay Dischargers Authority that runs under Monarch Bay Drive that transmits treated wastewater effluent from the City Water Pollution Control Plant located at the west end of Davis Street to a dechlorination facility south of Estudillo Canal. Discharge is ultimately to the deep water of the San Francisco Bay through the East Bay Dischargers Authority (EBDA) Common Outfall, located approximately seven miles offshore. This system was constructed in 1978. No local pipe systems are directly connected to this line.

EBDA is a Joint Powers Agency consisting of five local agencies. EBDA was formed on February 15, 1974, by a "Joint Exercise of Powers Agreement" entered into by the City of Hayward, City of San Leandro, Oro Loma Sanitary District, Union Sanitary District, and Castro Valley Sanitary District. EBDA was formed to collectively manage the wastewater treatment and disposal of these agencies. EBDA serves a population of 800,000 and provides service to Pleasanton, Dublin, and Livermore through an agreement with Livermore-Amador Valley Water Management Agency (LAVWMA).¹³

Wastewater discharge (effluent) from EBDA and its member agencies, including the City of San Leandro (Water Pollution Control Plant), is regulated by San Francisco Bay RWQCB Order No. R2-2012-0004 (NPDES No. CA0037869), adopted by the RWQCB January 18, 2012. In this Order, compliance with technology-based effluent limitations for CBOD, CBOD percent removal, TSS, TSS percent removal and pH will be determined at each individual treatment plant (i.e., including the San Leandro Water Pollution

¹² Walker, Judith M. City of San Leandro, Administrative Analyst September 23, 2014.

¹³ East Bay Dischargers Association (EBDA), <http://www.ebda.org/>. Accessed July 29, 2014.

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Control Plant). Compliance with these standards at each individual treatment plant is designed to ensure all facilities achieve compliance with minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133. Compliance with all other effluent limitations will be determined at the Common Outfall. EBDA has a total average daily dry weather flow (ADWF) *permitted* capacity of 107.8 mgd, which is permitted by RWQCB to be discharged at the EBDA Common Outfall. In 2010, the *actual* ADWF from EBDA's Common Outfall was 54.8 mgd. Thus, the EBDA had 53 mgd of excess unused permitted dry weather flow capacity in 2010. The EBDA has completed an Anti-Degradation Analysis to increase its ADWF from 107.8 mgd to 119.1 mgd (the RWQCB permit indicates this increase is pending approval from the RWQCB). The permitted peak daily wet weather flow (WWF) is 189.1 mgd. As reported in the Order No. R2-2012-004 (NPDES No. CA0037869), the San Leandro Water Pollution Control Plant serves a population of about 55,000 in the northern two-thirds of the City of San Leandro. The treatment plant is *permitted* by the RWQCB to provide secondary treatment of up to 7.6 mgd ADWF.¹⁴ In 2010, the *actual* ADWF from the Plant was 4.9 mgd. Thus, the Plant had 2.5 mgd of unused permitted dry weather flow capacity in 2010.

Treatment consists of grinding, grit removal, primary sedimentation, trickling filter, activated sludge, secondary clarification, and disinfection by sodium hypochlorite. Treated wastewater from the wastewater treatment facility is transported to EBDA's system for final de-chlorination and discharge to the EBDA Common Outfall. The City of San Leandro has a 3 million gallon pond and three tanks with 800,000 gallon capacity for emergency storage. Sludge is anaerobically digested, dewatered using a belt filter press, dried in open drying beds, and disposed of at an authorized disposal site.

4.14.2.2 STANDARDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, the Project would have a significant impact on wastewater service if it would:

1. Exceed wastewater treatment requirements of the applicable RWQCB.
2. Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
3. 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 provider's existing commitments.

4.14.2.3 IMPACT DISCUSSION

This section analyzes the Project's potential impacts and cumulative impacts to wastewater collection and treatment facilities.

¹⁴ The treatment plant also is permitted by the RWQCB to discharge up to 22.3 mgd Peak Daily Wet Weather Flow (PDWWF).

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UTIL-4 Implementation of the Project would not exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board.

The San Leandro sewer collection system will serve the Project and direct wastewater to the San Leandro Water Pollution Control Plant (SLWPCP). The SLWPCP directs treated wastewater to a common outfall controlled by EBDA, a joint powers authority, which discharges treated effluent to the San Francisco Bay. The San Francisco RWQCB established wastewater treatment requirements for the SLWPCP and the EBDA outfall in an NPDES Permit (Order No. R2-2012-0004), adopted in 2012. The NPDES Order sets out a framework for compliance and enforcement applicable to operation of the SLWPCP and its effluent, as well as other entities contributing influent to the EBDA's common outfall.

The SLWPCP treatment plant is *permitted* by the RWQCB to provide secondary treatment of up to 7.6 mgd ADWF. In 2010, the *actual* ADWF from the Plant was 4.9 mgd. Thus, the Plant had 2.7 mgd of unused permitted dry weather flow capacity in 2010.

The EBDA is permitted by the RWQCB to discharge 107.8 mgd ADWF from the EBDA Common Outfall. In 2010, the actual ADWF from EBDA's Common Outfall was 54.8 mgd. Thus, the EBDA had 53 mgd of excess unused permitted dry weather flow capacity in 2010.

The Water Supply Assessments performed by the City and EBMUD estimated that the Project would increase water demand by approximately 100,000 to 115,800 gallons per day (gpd). If it is conservatively assumed that all of this increased water demand becomes wastewater, then the Project will generate an increase of approximately 100,000 to 115,800 gpd of wastewater. This is not a significant increase compared to the excess permitted capacity available in 2010 at the SLWPCP. In addition, in 2011 the City began a project to upgrade the treatment plant to expand operational options, improve efficiency, add redundancy, and improve reliability.

With continued compliance with applicable regulations listed below, projected wastewater generated from the Project would not exceed the wastewater treatment requirements or capacity of the San Leandro Water Pollution Control Plant, or the San Francisco RWQCB's applicable treatment requirements in Order No. R2-2012-0004 (NPDES No. CA0037869). Therefore, the wastewater treatment requirements of the San Francisco RWQCB would not be exceeded due to buildout of the Project, resulting in a *less-than-significant* impact.

Applicable Regulations:

- San Francisco RWQCB NPDES Permit (Order No. R2-2012-0004) for SLWPCP
- SWRCB Order No. 2006-0003-DWQ for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems
- SWRCB Order No. WQ 2008-0002-EXEC revising SWRCB Order No. 2006-0003-DWQ
- City of San Leandro Sewer System Management Plan
- City of San Leandro Municipal Code, Section 7-9-505, Floodplain Management - Standards for Utilities
- City of San Leandro General Plan – Infrastructure Policies 52-01 (Development Impacts); 52-02 (Fair Share Costs); 52-03 (Coordination); 52-04 (Wastewater Collection and Treatment); and 52-05 (Capacity).

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Significance Before Mitigation: Less than significant.

UTIL-5 The Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.

Build out of the Project would have a significant impact if it would result in the construction of new wastewater treatment facilities or the expansion of existing facilities, the construction of which would have a significant effect on the environment. As discussed in Impact UTIL-4 above and Impact UTIL-6 below, future demands from the Project would not exceed the design or permitted capacity of the wastewater treatment plants serving the Project (i.e., SLWPCP).

The Project would continue to be provided with wastewater collection and treatment services from the City of San Leandro Water Pollution Control Division. Existing infrastructure would be preserved in place and, if necessary, extensions and/or replacement of sewer pipes/lift stations would be installed to provide wastewater service to structures proposed by the Project. For example, the existing “Blue Dolphin” lift station at the west end of Mulford Point Drive is inadequate to handle flows from the proposed hotel and restaurants, and will need to be replaced with a station of greater pumping and storage capacity. Although creation of new or extended wastewater pipes or lift stations/capacities could create short-term construction related environmental effects; most of the work would be in existing public rights-of-way or facilities, and would be subject to compliance with applicable regulations and standard conditions for sewer construction projects, including City permits/review for construction within public rights-of-way (e.g., grading permits, private development review, encroachment permits, etc.). For example, these regulations and conditions would require new construction to include best management practices that require construction activities to minimize dust generation by watering the construction area, limit construction noise to daytime hours to limit exposure to sensitive receptors, and use modern equipment to limit emissions. In addition, General Plan policies regarding infrastructure and development impacts, as discussed below, would further ensure any potential adverse physical effects of these activities would be less than significant.

The City regularly replaces aging components of its wastewater collection and transmission system. For example, the Sanitary Sewer Line Replacement and Repair Project 2012/2013, anticipated to be completed in Spring 2015, will replace or repair sewer mains, manholes or other aspects of the sewage collection system identified by video inspections to be defective or in need of repair.¹⁵ According to the SSMP, the City capital improvement program (CIP) process includes a system for evaluating the City’s collection system, which requires a continuing number of improvements including collection system capacity upgrades, correcting structural problems, and modifications to pump/lift stations and the treatment plant.^{16,17} In addition, General Plan Policies 52.01, 52.02, 52.03 and 52.04 (cited above) will ensure that development is not approved until it can be demonstrated that adequate wastewater

¹⁵ City of San Leandro. 2014. Planned Projects. https://sanleandro.org/depts/transit/project/planned_projects.asp. Accessed October 2, 2014.

¹⁶ City of San Leandro, 2009. Sewer System Management Plan, Volume I, July 2009.

¹⁷ In 2011 the City (Water Pollution Control Division) began a major rehabilitation of the treatment plant.

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collection capacity exists, or until a financial commitment to create such capacity has been secured. The Project would not affect the currently planned improvements and would not require additional improvements beyond those identified above.

As a result, in accordance with the applicable regulations listed below, impacts related to wastewater facilities would be *less than significant*.

Applicable Regulations:

- San Francisco RWQCB NPDES Permit (Order No. R2-2012-0004) for SLWPCP
- SWRCB Order No. 2006-0003-DWQ for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems
- SWRCB Order No. WQ 2008-0002-EXEC revising SWRCB Order No. 2006-0003-DWQ
- City of San Leandro Sewer System Management Plan
- City of San Leandro Municipal Code, Section 7-9-505, Floodplain Management - Standards for Utilities
- City of San Leandro General Plan – Infrastructure Policies 52-01 (Development Impacts); 52-02 (Fair Share Costs); 52-03 (Coordination); 52-04 (Wastewater Collection and Treatment); and 52-05 (Capacity).

Significance Before Mitigation: Less than significant.

UTIL-6	The Project would not result in the determination by the wastewater treatment provider, which serves the Project that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.
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As discussed under Impact UTIL-4 above, the SLWPCP treatment plant is permitted by the RWQCB to provide secondary treatment of up to 7.6 mgd ADWF. In 2010, the actual ADWF from the Plant was 4.9 mgd. Thus, the Plant had 2.7 mgd of unused permitted dry weather flow capacity in 2010.

The Water Supply Assessments performed by the City and EBMUD estimated the Project would increase water demand by approximately 100,000 to 115,800 gallons per day (gpd). If it is conservatively assumed that all of this increased water demand becomes wastewater, then the Project will generate an increase of approximately 100,000 to 115,800 gallons of wastewater. Thus, the Project's worst-case estimated increase in wastewater flow represents less than 5 percent of the excess capacity available in 2010 at the SLWPCP. In addition, in 2011, the City began a project to upgrade the treatment plant to expand operational options, improve efficiency, add redundancy, and improve reliability (but not increase capacity).

The EBMUD UWMP projected future water demand to increase approximately 6.5%¹⁸ between 2015 and 2040 for its entire service area, which includes the city of San Leandro. The SLWPCP in 2010 had 32%

¹⁸ 2040 adjusted (recycling and conservation) demand (230 mgd) minus 2010 adjusted demand (216 mgd) divided by 216 mgd = ~ 6.5 %.

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excess wastewater capacity (2.5/7.6). Therefore, cumulative future wastewater demand also will be easily accommodated by the Plant, based on the conservative assumption that wastewater demand is equal to water demand, and given that EBMUD's May 13, 2014 Water Supply Assessment letter stated "[T]he water demand for the City of San Leandro Shoreline Development Project is accounted for in EBMUD's water demand projections as published in EBMUD's 2010 Urban Water Management Plan."

With continued compliance with applicable regulations listed below, wastewater generated from the Project would not exceed the capacity of the San Leandro Water Pollution Control Plant, or the permitted capacity specified in the San Francisco RWQCB's Order No. R2-2012-0004 (NPDES No. CA0037869). Therefore, the Project would not result in the determination by the wastewater treatment provider that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments, resulting in a *less-than-significant* impact.

Applicable Regulations:

- San Francisco RWQCB NPDES Permit (Order No. R2-2012-0004) for SLWPCP
- SWRCB Order No. 2006-0003-DWQ for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems
- SWRCB Order No. WQ 2008-0002-EXEC revising SWRCB Order No. 2006-0003-DWQ
- City of San Leandro Sewer System Management Plan
- City of San Leandro Municipal Code, Section 7-9-505, Floodplain Management - Standards for Utilities
- City of San Leandro General Plan – Infrastructure Policies 52-01 (Development Impacts); 52-02 (Fair Share Costs); 52-03 (Coordination); 52-04 (Wastewater Collection and Treatment); and 52-05 (Capacity).

Significance Before Mitigation: Less than significant.

4.14.2.4 CUMULATIVE IMPACT DISCUSSION

UTIL-7 The Project, in combination with past, present, and reasonably foreseeable projects would result in less than significant cumulative impacts with respect to wastewater service.

This section analyzes potential impacts related to wastewater treatment that could occur from the Project in combination with reasonably foreseeable growth within the SLWPCP and EBDA service areas.

Buildout of the Project would generate a minor increase in the volume of wastewater delivered for treatment at SLWPCP and eventual discharge through EBDA's common outfall. This increase represents less than 5 percent of the *excess* available treatment capacity and less than 1.6 percent (115,800 gpd/7.6 mgd) of the *total* available treatment capacity at the SLWPCP in 2010. The increased Project wastewater flow represents less than 0.11 percent (115,800 gpd/107.9 mgd) of the EBDA's permitted average daily dry weather flow. Based on the current excess wastewater treatment capacity of SLWPCP and excess discharge capacity EBDA, and the projected population growth and water demand in the service area,

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cumulative projected wastewater treatment demand is far below the excess capacity of the SLWPCP and EBDA¹⁹. Because the cumulative demand would not substantially impact the existing or planned capacity of the wastewater treatment systems, which have sufficient capacity for wastewater that would be produced by the Project, the construction of new wastewater treatment facilities would not be necessary.

Additionally, future development would be required to comply with all applicable regulations and ordinances protecting wastewater treatment services as described in Section 4.14.2.1.

Wastewater from cumulative projects is assumed in the City's SSMP and would be treated according to the wastewater treatment requirements documented in the referenced NPDES permit for SLWPCP and EBDA, and enforced by the San Francisco RWQCB.

Therefore, with continued compliance with applicable regulations listed below, cumulative development combined with the Project would not exceed wastewater treatment requirements, and cumulative impacts to sanitary wastewater service would be less than significant.

Applicable Regulations:

- San Francisco RWQCB NPDES Permit (Order No. R2-2012-0004) for SLWPCP
- SWRCB Order No. 2006-0003-DWQ for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems
- SWRCB Order No. WQ 2008-0002-EXEC revising SWRCB Order No. 2006-0003-DWQ
- City of San Leandro Sewer System Management Plan
- City of San Leandro Municipal Code, Section 7-9-505, Floodplain Management - Standards for Utilities
- City of San Leandro General Plan – Infrastructure Policies 52-01 (Development Impacts); 52-02 (Fair Share Costs); 52-03 (Coordination); 52-04 (Wastewater Collection and Treatment); and 52-05 (Capacity).

Significance Before Mitigation: Less than significant.

¹⁹ According to the respective 2010 UWMPs, the project increased water demand from 2010 to 2035/2040 for the EBMUD (~ 6.5%), Alameda County Water District (ACWD) (16%), and the water suppliers to the LAVWMA (30%) – the water suppliers that together account for essentially all of the wastewater through the EBDA outfall -- will be far less than the existing excess capacity of the of the EBDA outfall in 2010 (49%; 107.8-54.8/107.8). [Wastewater demand is conservatively assumed to be equivalent to water demand.]

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4.14.3 SOLID WASTE

4.14.3.1 ENVIRONMENTAL SETTING

Regulatory Setting

State Regulations

California Integrated Waste Management Act

California's Integrated Waste Management Act of 1989, AB 939 (Sher), subsequently amended by SB 1016 (Wiggins), 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. To help achieve this, the Act required that each city and 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 on-going landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on two factors: a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. The California Integrated Waste Management Board was replaced by the California Department of Resources Recycling and Recovery (CalRecycle) in 2010. CalRecycle sets a target per capita disposal rate 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. In 2013, the statewide residential per capita disposal rate was 4.4 pounds per resident per day, and the statewide employee per capita disposal rate was 10.2 pound per employee per day.²⁰

In 2011, AB 341 was passed that sets a State policy goal of not less than 75 percent of solid waste that is generated to be source reduced, recycled, or composted by the year 2020. CalRecycle was required to submit a report to the legislature by January 1, 2014 outlining the strategy that will be used to achieve this policy goal.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act require areas in development projects to be set aside for collecting and loading recyclable materials. The Act required CalRecycle (formerly CIWMB) to develop a model ordinance for adoption by any local agency relating to 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, providing for adequate areas in development projects for the collection and loading of recyclable materials.

²⁰ Calrecycle, California's Statewide Per Resident, Per Employee, and Total Disposal Since 1989, <http://www.calrecycle.ca.gov/Igcentral/GoalMeasure/DisposalRate/Graphs/Disposal.htm>, accessed on July 31, 2014.

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Global Warming Solutions Act of 2006, Scoping Plan²¹

The California Global Warming Solutions Act of 2006 (also known as AB 32) Scoping Plan, which was adopted by the Air Resources Board (ARB), included a Mandatory Commercial Recycling Measure. The Mandatory Commercial Recycling Measure focuses on diverting commercial waste as a means to reduce greenhouse gas (GHG) emissions, with the goal of reducing GHG emissions by 5 million metric tons of carbon dioxide equivalents (MTCO_{2e}), consistent with the 2020 targets set by AB 32. To achieve the Measure's objective, the commercial sector will need to recycle an additional 2 to 3 million tons of materials annually by the year 2020.

CalRecycle adopted this Measure at its January 17, 2012 Monthly Public Meeting. The regulation was approved by the Office of Administrative Law on May 7, 2012 and became effective immediately. On June 27, 2012, the Governor signed SB 1018, which included an amendment requiring both businesses that generate 4 cubic yards or more of commercial solid waste per week and multi-family residences with five or more units to arrange for recycling services. This requirement became effective on July 1, 2012.

CAL Green Building Code

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations [CCR]) to apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout the State of California, unless otherwise indicated in this code. Section 4.408, Construction Waste Reduction Disposal and Recycling, mandates that, in the absence of a more stringent local ordinance, a minimum of 50 percent of non-hazardous construction and demolition debris must be recycled or salvaged. The Code requires the Applicant to have a waste management plan, for on-site sorting or construction debris, which is submitted to the City of San Leandro for approval. The Plan does the following:

- Identifies the materials to be diverted from disposal by recycling, reuse on the Project or salvage for future use or sale.
- Specifies if materials will be sorted on-site or mixed for transportation to a diversion facility.
- Identifies the diversion facility where the material collected can be taken.
- Identifies construction methods employed to reduce the amount of waste generated.
- Specifies that the amount of materials diverted shall be calculated by weight or volume, but not by both.

²¹ CalRecycle, <http://www.calrecycle.ca.gov/Recycle/Commercial/>. Accessed on July 31, 2014.

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Local Regulations

City of San Leandro General Plan

The City continues to promote recycling and reduce the amount of solid waste placed in landfills. The General Plan includes goal, policies, actions and implementation strategies with regards to solid waste collection, recycling and disposal, as summarized in Table 4.14-3.

City of San Leandro Municipal Code

The City of San Leandro Municipal Code is a primary tool that shapes the form and character of physical development in San Leandro. The Municipal Code identifies site development regulations, and other general provisions that ensure consistency between the General Plan and proposed development projects. The Municipal Code is organized by Title, Chapter, Article, and Section. The current Municipal Code is up to date through Ordinance 2014-006 and the June 2014 code supplement. The following provision from the Municipal Code helps minimize solid waste generation and conserve resources in San Leandro.

- Chapter 3-19, The City's Green Building Ordinance, requires a minimum Leadership in Energy & Environmental Design (LEED) rating of "Silver" for construction projects valued at over \$3 million on City-owned facilities. (LEED is a rating system created by the U.S. Green Building Council that ranks different levels of design and construction aimed at improving a building's energy efficiency.) The ordinance promotes healthy and efficient City facilities through design, construction and operation, and helps the City reduce its energy consumption and carbon emissions. Green buildings use recycled-content materials, consume less energy and water, have better indoor air quality, and use fewer natural resources than conventional buildings. The Chapter finds that the most immediate and meaningful way to advance this cause is to include green building elements in City projects, and to encourage private projects to include green building elements.

City of San Leandro Green Building Checklist

A Green Building Checklist to ensure compliance with the 2013 California Green Building Standard Code, also known as CALGreen, is listed on the City's web site²² for both residential and commercial projects. Starting January 1, 2014, new construction, additions, and alterations are subject to CALGreen requirements. The checklist must be submitted with and incorporated into the plan sets, and any items that are marked on the checklists must then be referenced and detailed in the plans.

²² City of San Leandro, Green Building Checklists, <http://www.sanleandro.org/depts/cd/bldg/bldggreen.asp> , accessed July 31, 2014.

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TABLE 4.14-3 SOLID WASTE-RELATED GOALS AND POLICIES OF THE SAN LEANDRO GENERAL PLAN

Goal /Policy Number	Goals, Policies, and Actions	Implementation Strategies
Chapter 5, Open Space, Parks and Conservation		
Goal 27	Resource Conservation. Promote recycling, water conservation, and other programs which create a more sustainable environment.	
Policy 27.01	<p>RECYCLING</p> <p>Actively promote recycling, composting, and other programs that reduce the amount of solid waste requiring disposal in landfills.</p> <p>Action 27.01-A: Source Reduction and Recycling Programs Implement the Source Reduction and Recycling programs necessary to divert 75 percent of San Leandro’s wastestream from landfills by 2010.</p> <p>Action 27.01-B: Waste Reduction Programs <i>Encourage special bulky waste pick-up events, citywide garage sales, programs offering rebates for inefficient appliances or polluting vehicles, and other waste collection activities that reduce pollution, excessive resource consumption, and improper waste disposal.</i></p> <p>Action 27.01-C: Commercial and Multi-Family Residential Programs <i>Expand recycling programs serving multi-family dwellings and commercial-industrial customers, and develop new recycling programs that target construction and demolition debris and old computers. These programs should include a significant public information and education component aimed at local businesses and should be coordinated through the Chamber of Commerce and other business organizations.</i></p> <p>Action 27.01-D: Food Waste Recycling <i>Implement a food waste recycling program.</i></p> <p>Action 27.01-E: Public Education <i>Expand public education on recycling, particularly for apartment dwellers . Promote school programs that educate children about recycling.</i></p>	Solid Waste Management Program
Policy 27.05	<p>CITY CONSERVATION PRACTICES</p> <p>Ensure that City itself follows conservation practices in its day-to-day operations and is a role model for businesses and residents in the area of conservation. The City should encourage the use of reusable and recyclable goods in its purchasing policies and practices, and should develop strategies that encourage residents and businesses to do the same.</p> <p>Action 27.05-A: Community Conservation Events <i>Promote community events and fairs that increase environmental awareness, such as Arbor Day tree planting, Earth Day activities, shoreline clean-ups, and creek restoration.</i></p> <p>Action 27.05-B: Recycling Incentives <i>Explore incentive programs to promote recycling, including awards or monetary bonuses for exemplary recycling customers.</i></p>	<p>City Operating Procedures</p> <p>Public Education and Outreach Programs</p>
Chapter 8, Community Services and Facilities		
Goal 52	Infrastructure. Ensure that local water, sewer, storm drainage, and solid waste facilities are well maintained; improvements meet existing and future needs; and land use decisions are contingent on the adequacy and maintenance of such facilities.	
Policy 52-01	<p>DEVELOPMENT IMPACTS</p> <p>Permit new development only when infrastructure and utilities can be provided to that development without diminishing the quality of service provided to the rest of the City.</p>	<p>Capital Improvement Program</p> <p>Development Review</p>
Policy 52-02	<p>FAIR SHARE COSTS</p> <p>Require future development to pay its fair share of the cost of improving the</p>	Development Review

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TABLE 4.14-3 SOLID WASTE-RELATED GOALS AND POLICIES OF THE SAN LEANDRO GENERAL PLAN

Goal /Policy Number	Goals, Policies, and Actions	Implementation Strategies
	<p>water, sewer, drainage, and other infrastructure systems needed to serve that development. Use fees and other appropriate forms of mitigation to cover the costs of upgrading public infrastructure.</p> <p>Action 52.02-A: Infrastructure Impact Fee and Rate Updates Regularly update fees and rates for sewer, solid waste, and other public services to ensure that revenues are sufficient to cover operating and maintenance costs.</p>	Impact/In-Lieu Fees
Policy 52-03	<p>COORDINATION</p> <p>Coordinate local infrastructure planning with EBMUD, the Oro Loma Sanitary District, Alameda County, and other service providers to ensure that infrastructure remains adequate to serve existing and planned development.</p>	Intergovernmental Coordination

Source: City of San Leandro 2002-2015 General Plan.

Voluntary Green Building Guidelines for Private Development

In 2006, the San Leandro City Council endorsed several leading guidelines developed by outside organizations for commercial and residential green building practices as well as sustainable landscaping. The endorsed guidelines include: 1) Build it Green GreenPoint Rated Guidelines (residential); 2) US Green Building Council (LEED) Guidelines (commercial); and 3) StopWaste Bay-Friendly Landscaping Guidelines. The guidelines are available on the City’s web site.²³ To help private developers and homeowners implement green building measures, several City of San Leandro staff members have completed technical training in green building, and the City maintains an informational kiosk showcasing green building materials and techniques in its Permit Center on the first floor of City Hall.

Existing Conditions

This section describes existing conditions related to solid waste disposal services.

Solid waste removal services for the Project site are provided by Alameda County Industries (ACI), a private hauler under a franchise agreement with the City of San Leandro. Solid waste is transported via truck to the transfer station at ACI’s property 610 Aladdin Avenue. Solid waste is trucked from the transfer station to numerous landfills serving San Leandro.

CalRecycle reports that in 2013 a total of 165,366 tons of solid waste from San Leandro was disposed at 21 different landfills.²⁴ Ninety-five percent (95%) of San Leandro’s solid waste in 2013 went to five of those facilities: Altamont Landfill & Resource Recovery (33,472 tons, or 20.24%); Forward Landfill, Inc. (39,092 tons, or 23.64%); Newby Island Sanitary Landfill (23,725, or 14.35%); Potrero Hills Landfill (19,683 tons, or 11.90%); and Vasco Road Sanitary Landfill (40,825 tons, or 24.69%).

²³ City of San Leandro, Green Building Guidelines, <http://www.sanleandro.org/depts/cd/bldg/bldggreen.asp>, accessed on July 31, 2014.

²⁴ CalRecycle Jurisdiction Disposal by Facility, <http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=OriginJurisdictionIDs%3d447%26ReportYear%3d2013%26ReportName%3dReportEDRSJurisdictionDisposalByFacility>. Accessed on July 31, 2014.

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Altamont Landfill and Resource Recovery Facility

The Altamont Landfill and Resource Recovery facility is owned and operated by Waste Management Inc., and is located on a 2,130 acres site at 10840 Altamont Pass Road, Livermore, CA 94550. It is a Class II and Class III landfill and features a disposal area of approximately 472 acres. The facility can receive up to 11,500 tons of solid waste for disposal per day, with a maximum permitted capacity of approximately 62 million cubic yards. The most current data available from CalRecycle indicates that the facility has an estimated closure date of January 1, 2025.²⁵

Forward Landfill, Inc.

The Forward Landfill, Inc., is located at 9999 S. Austin Road, Manteca, CA 95336. It is a Class I, Class II and Class III landfill. There are four disposal areas listed by CalRecycle, with data available for two of the areas. Area 01 has 354.5 acres of disposal area. It can receive up to 8,668 tons/day, with a total permitted capacity of 51,040,000 cubic yards. Area 02 has 157 acres disposal area. It can receive up to 8,668.00 tons/day, with a total permitted capacity of 51,040,000 cubic yards. The estimated closure date for Areas 01 and 02 is January 1, 2020.

Newby Island Landfill

The Newby Island Sanitary Landfill is a subsidiary of Republic Services, and is located at 1601 Dixon Landing Road in the city of Milpitas. This Class III landfill was established in 1938 and has an area of 342 acres. This landfill's total capacity is 50.8 million cubic yards; as of 2000, the landfill's total estimated used capacity was 32.5 million cubic yards, or 64 percent of the landfill's total capacity. The remaining capacity was 18,274,953 cubic yards, as of October 16, 2006. The permitted daily disposal capacity is 4,000 tons per day, and the landfill is anticipated to have sufficient overall capacity until June 2025, its estimated closure date.

Potrero Hills Landfill

The Potrero Hills Landfill is a Class III facility located in Fairfield, California, with a mailing address of 675 Texas St, Ste. 5500 Fairfield, CA 94533. The permitted disposal area is 340 acres, and the permitted maximum throughput is 4,330 tons/day. The maximum permitted capacity is 83,100,000 cubic yards. The estimated closure date is February 18, 2048.

Vasco Road Sanitary Landfill

The Vasco Road Sanitary Landfill is owned and operated by Republic Services of California I, LLC. This Class II and Class III facility is located at 4001 North Vasco Road, Livermore, CA 94550. The maximum permitted daily throughput is 2,250 tons/day. It has 222 acres of disposal area. The maximum permitted capacity is 32,970,000 cubic yards. The estimated closure date is August 31, 2019.

²⁵ CalRecycle, "Facility Site summary Details: Altamont Landfill and Resource Recovery Facility (01-AA-0009)" <http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0009/Detail/>. Accessed on July 31, 2014.

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4.14.3.2 STANDARDS OF SIGNIFICANCE

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, the Project would have a significant impact on solid waste service if:

1. Implementation of the Project would not be served by a landfill(s) with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs.
2. Implementation of the Project would be out of compliance with federal, State, and local statutes and regulations related to solid waste.

4.14.3.3 IMPACT DISCUSSION

UTIL-8 The Project would be served by a landfill with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs.

In 2013, CalRecycle reported that 95 percent of the City’s solid waste disposal waste went to a total of five landfills. Table 4.14-4 compares the maximum daily capacity and estimated closure date for each of the five facilities.

TABLE 4.14-4 LANDFILLS EXISTING DAILY CAPACITY AND ESTIMATED CLOSURE DATE

Landfill Facility	Daily Capacity (tons/day)	Estimated Closure Date
Altamont Landfill	11,500	1/1/2025
Forward Sanitary Landfill	8,668	1/1/2020
Newby Island Landfill	4,000	6/1/2025
Potrero Hills Landfill	4,330	2/14/2048
Vasco Road Sanitary Landfill	2,250	8/31/2019

The City of San Leandro disposal rate per *resident* in 2011 was 4.0 pounds of solid waste per person per day (ppd), which was below the CalRecycle target of 8.7 ppd per resident.

The disposal rate per business *employee* in the City in 2012 was 9.1 ppd, which was below the CalRecycle target rate of 18.2 ppd per employee.²⁶ CalRecycle also reports the City’s per capita disposal rates in 2012 were 6.6 ppd for residents and 14.9 ppd for employees; however these 2012 data are still awaiting review by the agency²⁷. The city of San Leandro’s disposal rates for both residents and employees have been below target²⁸ rates since 2007.

²⁶ CalRecycle, Jurisdiction Diversion Post 2006, <http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx>. Accessed on July 31, 2014.

²⁷ According to the CalRecycle web site, “Awaiting Review” means “The Department has not completed its analysis, or approved the per capita disposal figures or program implementation for the years included in this review cycle.” <http://www.calrecycle.ca.gov/LGCentral/DataTools/Reports/BRDefine.htm#Annual>. Accessed October 4, 2014.

²⁸ The per capita disposal rate *target* is also known as “the 50 percent equivalent per capita disposal target.” It is the amount of disposal San Leandro would have had during the 2003 – 2006 base period (designated by CalRecycle) if it had been exactly at a 50 percent diversion rate. It is calculated by CalRecycle using the average base period per capita generation for San Leandro (in pounds), then dividing this generation average in half to determine the 50 percent equivalent per capita disposal target. The target is an indicator for comparison with that jurisdiction’s annual per capita per day disposal rate beginning with the 2007 program year.

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In Section 4.11.3 of this Draft EIR it is estimated the Project will generate an increase of 970 residents and 822 jobs. For analysis purposes, if solid waste generation is assumed to be the actual 2012 San Leandro per capita generation rates of 6.6 ppd for residents and 14.9 ppd for employees, the total solid waste generated by the Project's residents and workers is estimated to be 18,650 pounds per day, or 9.3 tons per day.²⁹

For analysis purposes this EIR assumes double the estimated rate of solid waste generated by the project residents and workers to account for visitors to the Project site (e.g., restaurants, hotels, recreation, etc.). This results in a total estimated solid waste generation rate for the Project of 18.6 tons per day, which is far less than one percent of the smallest daily capacity of the five landfills providing disposal services to the City (2,250 tons/day for Vasco Sanitary Landfill), as shown in Table 4.14-4. As such, the Project would have a less-than-significant impact with regard to daily capacity at each of the landfill facilities.

Four of the five landfills that receive the majority of the city's solid waste are likely to reach their permitted maximum capacities between 2019 and 2025, as shown in the Table 4.14-4. However, one of the five is not estimated to close until 2048 (Potrero Hills Landfill). In addition, there are 21 landfills that received waste from the City in 2013 and, if one or more of the five landfills on Table 4.14-4 were unavailable in the future, it is likely the City's solid waste volume could be increased at one or more of the other landfills that already serve the City.

With continued compliance with applicable regulations listed below, leading to increased recycling and waste diversion, anticipated rates of solid waste disposal from the Project would have a *less-than-significant* impact in regard to permitted landfill capacity.

Applicable Regulations:

- California Integrated Waste Management Act
- Global Warming Solutions Act of 2006, Scoping Plan
- CAL Green Building Code
- City of San Leandro Green Building Checklist
- City of San Leandro Municipal Code, Chapter 3-19, The City's Green Building Ordinance
- City of San Leandro General Plan – Policies 27-01 (Recycling) and 27-05 (Conservation Practices).

Significance Before Mitigation: Less than significant.

UTIL-9 **The Project would comply with federal, State, and local statutes and regulations related to solid waste.**

As discussed above, the City of San Leandro 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. The City has established a mandatory Green Building Checklist. The checklist must be submitted with and incorporated into the development plan sets, and any items that are marked on the checklist must then be referenced and detailed in the plans.

²⁹ 970 x 6.6 = 6,402 pounds, plus 822 x 14.9 = 12,248 pounds; totaling 18,650 pounds per day, or 9.3 tons per day.

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The General Plan includes goals, policies, actions and strategies that promote recycling, conservation, and help ensure adequate waste collection and disposal facilities are available for the residents and workers of San Leandro. Together these policies and actions help to ensure that implementation of the Project is consistent with statutes and regulations related to solid waste.

Therefore, in accordance with the applicable regulations listed below, development of the Project would comply with applicable statutes and regulations and the impact would be *less than significant*.

Applicable Regulations:

- California Integrated Waste Management Act
- Global Warming Solutions Act of 2006, Scoping Plan
- CAL Green Building Code
- City of San Leandro Green Building Checklist
- City of San Leandro Municipal Code, Chapter 3-19, The City's Green Building Ordinance
- City of San Leandro General Plan – Policies 27-01 (Recycling) and 27-05 (Conservation Practices).

Significance Before Mitigation: Less than significant.

4.14.3.4 CUMULATIVE IMPACT DISCUSSION

UTIL-10 The Project, in combination with past, present, and reasonably foreseeable development, would result in less than significant impacts with respect to solid waste.

The buildout of the Project will increase the quantity of solid waste for disposal. Although AB 939 established a goal for all California cities to provide at least 15 years of ongoing landfill capacity, growth from other projects within the City, and from other cities in the region, may exceed that which was taken into account when calculating landfill capacity. Also, because four of the five landfill facilities, which take approximately 95 percent of the City's solid waste (in 2013) are expected to close between 2019 and 2025, San Leandro or other jurisdictions that use the same facilities may eventually experience insufficient future landfill capacity to accommodate existing or increased population and employment levels.

However, one of the main five landfills serving the City is not estimated to close until 2048 (Potrero Hills Landfill). In addition, there are 21 landfills that received waste from the City in 2013. If one or more of the main five landfills were unavailable in the future, it is likely the City's solid waste volume could be increased at one or more of the other landfills that already serve the City.

As shown in the Chapter 4.11, Population and Housing, of this Draft EIR, projected growth in San Leandro with the Project is less than that anticipated by regional ABAG projections. In addition, the City's General Plan anticipated the growth in housing and employment proposed as a part of the Project. Therefore, considering that the amount of growth anticipated would not exceed ABAG projections and that the anticipated growth was adequately planned for in the City's General Plan, the Project would not induce substantial unexpected population growth, or growth for which inadequate planning has occurred – including planning with respect to solid waste -- and a less-than-significant impact would result in this respect.

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Therefore, with continued compliance with the applicable regulations listed below, the solid waste related impact of the Project, in combination with past, present and reasonably foreseeable development, would be *less than significant*.

Applicable Regulations:

- California Integrated Waste Management Act
- Global Warming Solutions Act of 2006, Scoping Plan
- CAL Green Building Code
- City of San Leandro Green Building Checklist
- City of San Leandro Municipal Code, Chapter 3-19, The City's Green Building Ordinance
- City of San Leandro General Plan – Policies 27-01 (Recycling) and 27-05 (Conservation Practices).

Significance Before Mitigation: Less than significant.

4.14.4 ENERGY CONSERVATION

In order to assure that energy implications are considered in project decisions, Appendix F, Energy Conservation, of the CEQA Guidelines, requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. This section provides a general description of the regulatory setting addressing existing electric and natural gas services and infrastructure, and supply and demand in San Leandro.

4.14.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Energy Independence and Security Act of 2007

Signed into law in December 2007, this Act is an energy policy law that contains provisions designed to increase energy efficiency and the availability of renewable energy. The Act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

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 Act includes tax incentives for the following: 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.

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National Energy Policy

Established in 2001 by the National Energy Policy Development Group, this 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.

State Regulations

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. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

1. All new residential construction in California will be zero net energy by 2020;
2. All new commercial construction in California will be zero net energy by 2030;
3. Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and
4. 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 state's electricity and gas use.

The CPUC and the California Energy Commission (CEC) have adopted the following goals to achieve zero net energy (ZNE) levels by 2030 in the commercial sector:

- *Goal 1: New construction will increasingly embrace zero net energy 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 zero net energy 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.*

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California Building Code (California Code of Regulations, Title 24, Part 6)

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and revised in 2008 (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. On May 31, 2012, the CEC adopted the 2013 Building and Energy Efficiency Standards, which went into effect on January 1, 2014. Buildings that are constructed in accordance with the 2013 Building and Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

CALGreen Building Code (California Code of Regulations, Title 24, Part 11)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). 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. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011. The building efficiency standards are enforced through the local building permit process. The Code was updated again in 2013, effective January 1, 2014, except energy based measures whose implementation was delayed until July 1, 2014.

The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental quality

The provisions of CALGreen apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in this code, throughout the State of California. Compliance with the CALGreen Code is not a substitution for meeting the certification requirements of any green building program. CALGreen requires new buildings to reduce the building's water use baseline consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (Title 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

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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.

Governor’s Green Building Executive Order (S-20-04)

In 2004, Executive Order (EO) S-20-04 was signed by the Governor, committing the State to take aggressive action to reduce state 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 “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 U.S. EPA Energy Star rating; and
- Purchasing or operating Energy Star electrical equipment whenever cost-effective.

State Greenhouse Gas Regulations

The Governor’s GHG Reduction Executive Order S-3-05 was signed on June 1, 2005, and set GHG reduction targets for the State. Soon after, AB 32, the Global Warming Solutions Act (2006) was passed by the California state legislature on August 31, 2006, to place the State on a course toward reducing its contribution of GHG emissions. In response to AB 32, the California Air Resources Board (CARB) developed a Scoping Plan outlining California’s approach to achieving the goal of reducing GHG emissions to 1990 levels by 2020. The final Scoping Plan was adopted by CARB on December 11, 2008. CARB approved the first 5-year Update to the Climate Change Scoping Plan on May 22, 2014, as required by AB 32. For a detailed discussion on these regulations, see Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR.

Senate Bill X1-2

Signed by Gov. Edmund G. Brown, Jr. in 2011, SB X1-2 directs CPUC’s Renewable Energy Resources Program to increase the amount of electricity generated from eligible renewable energy resources per year to an amount that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2013, 25% by December 31, 2016 and 33% by December 31, 2020. SB X1-2 codifies the 33 percent by 2020 renewable portfolio standard (RPS) *goal* established pursuant to the Global Warming Solutions Act of 2006. This new RPS applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and the 33 percent requirement being met by the end of 2020.

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Local Regulations

City of San Leandro General Plan

The City continues to promote energy conservation. The General Plan includes goal, policies, actions and implementation strategies with regards to energy are summarized in Table 4.14-5.

City of San Leandro Municipal Code

The City of San Leandro Municipal Code is a primary tool that shapes the form and character of physical development in San Leandro. The Municipal Code identifies site development regulations, and other general provisions that ensure consistency between the General Plan and proposed development projects. The Municipal Code is organized by Title, Chapter, Article and Section. The current Municipal Code is up to date through Ordinance 2014-006 and the June 2014 code supplement. The following provision from the Municipal Code helps minimize energy use and conserve resources in San Leandro.

- Chapter 3-7, The City's Construction and Demolition Debris Waste Reduction and Recycling Requirements, requires projects with valuations over \$100,000 (adjusted every five years from 2008) to recycle 100% of asphalt and concrete and 50% of remainder of construction and demolition debris.
- Chapter 3-19, The City's Green Building Ordinance, requires a minimum Leadership in Energy & Environmental Design (LEED) rating of "Silver" for construction projects valued at over \$3 million on City-owned facilities. (LEED is a rating system created by the U.S. Green Building Council that ranks different levels of design and construction aimed at improving a building's energy efficiency.) The ordinance promotes healthy and efficient City facilities through design, construction, and operation, and helps the City reduce its energy consumption and carbon emissions. Green buildings use recycled-content materials, consume less energy and water, have better indoor air quality, and use fewer natural resources than conventional buildings. The chapter finds that the most immediate and meaningful way to advance this cause is to include green building elements in City projects, and to encourage private projects to include green building elements.

City of San Leandro Green Building Checklist

A Green Building Checklist to ensure compliance with the 2013 California Green Building Standard Code, also known as CALGreen, is listed on the City's web site for both residential and commercial projects. Starting January 1, 2014, new construction, additions, and alterations are subject to CALGreen requirements. The checklist must be submitted with and incorporated into the plan sets, and any items that are marked on the checklists must then be referenced and detailed in the plans.

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TABLE 4.14-5 ENERGY-RELATED GOALS AND POLICIES OF THE SAN LEANDRO GENERAL PLAN

Goal/Policy Number	Goals, Policies, and Actions	Implementation Strategies
Chapter 5, Open Space, Parks and Conservation		
Goal 28	Energy. Promote the efficient use of energy and a reliable long-term energy supply for San Leandro residents and businesses.	
Policy 28.01	<p>CONSERVATION ADVOCACY</p> <p>Strongly advocate for increased energy conservation by San Leandro residents and businesses, and ensure that the City itself is a conservation role model.</p> <p>Action 28.01-A: Energy Retrofits of Public Facilities <i>Pursue the retrofitting of City facilities to improve energy efficiency, including the development of solar heating systems for public swimming pools and the installation of low wattage lighting. Perform additional retrofitting in the future in the event new technology or new renewable energy sources become available.</i></p>	<p>Annual Budget</p> <p>City Operating Procedures</p> <p>Public Education and Outreach Programs</p>
Policy 28.02	<p>PLANNING AND BUILDING PRACTICES</p> <p>Encourage construction, landscaping, and site planning practices that minimize heating and cooling costs and ensure that energy is efficiently used. Local building codes and other City regulations and procedures should meet or exceed state and federal standards for energy conservation and efficiency.</p> <p>Action 28.02-A: Land Use Regulations <i>Review local land use regulations (including the zoning code, building code, and subdivision ordinances) to ensure that there are no obstacles to the use of solar power or the development of alternative energy sources, and to include guidelines that promote solar access in new subdivisions.</i></p>	<p>Building Code (Title 24)</p> <p>Design Guidelines</p> <p>Development Review</p> <p>Zoning</p>
Policy 28.03	<p>WEATHERIZATION</p> <p>Promote the weatherization and energy retrofitting of existing homes and businesses, including the development of solar space heating and water heating systems, and the use of energy-efficient lighting, fixtures and appliances.</p> <p>Action 28.03-A: Incentives for Energy Retrofits <i>Establishes incentives for energy retrofits upon the sale or purchase of a residence.</i></p>	<p>Building Code</p> <p>Program Development</p> <p>Public Education and Outreach Programs</p>
Policy 28.04	<p>LOCAL ENERGY RESOURCES</p> <p>Accommodate the use of local alternative energy resources, such as solar power, wind, methane gas, and industrial waste heat (cogeneration). Ensure that alternative energy infrastructure is compatible with surrounding land uses and minimizes environmental impacts on the community.</p> <p>Action 28.04-A: Solar Access Ordinance <i>Adopt a solar access ordinance which protects opportunities for solar heating of San Leandro residences.</i></p> <p>Action 28.04-B: Solar Panel Siting Guidelines <i>Adopt guidelines for the placement of solar heating panels on San Leandro residences and establish a fee reduction or fee waiver policy for persons installing solar heating systems that meet these guidelines. The guidelines should ensure that the visual impacts of solar panels (from the street and surrounding properties) are minimized.</i></p>	<p>Building Code</p> <p>Development Review</p> <p>Municipal Code and Ordinances</p> <p>Zoning</p>

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TABLE 4.14-5 ENERGY-RELATED GOALS AND POLICIES OF THE SAN LEANDRO GENERAL PLAN

Goal/Policy Number	Goals, Policies, and Actions	Implementation Strategies
Policy 28.05	<p>PUBLIC INFORMATION AND EDUCATION</p> <p>Promote public information and education on energy conservation and retrofit programs, in part through partnerships with the agencies offering such programs.</p> <p>Action 28.05-A: Realtor and Lender Programs</p> <p><i>Work with local realtors and lenders to distribute information on local energy retrofit programs, "energy star" products, energy-efficient mortgages, energy related tax credits, and local contractors providing retrofit and weatherization services.</i></p> <p>Action 28.05-B: Public Information</p> <p><i>Develop and disseminate information to San Leandro residents and businesses on energy conservation. Work with the School Districts to provide similar information to school children and their families.</i></p>	<p>Public Education and Outreach Programs</p> <p>Public/Private Partnerships</p>
Policy 28.06	<p>REDUCING PEAK DEMAND</p> <p>Encourage innovative responses to reduce peak demands on the electric power grid, such as flexible work shifts and the development of local power sources.</p> <p>Action 28.06-A: Energy Municipalization</p> <p><i>Closely monitor the state and national energy situation to develop appropriate local responses. The City should keep open the option of creating a municipal energy department responsible for purchasing and delivering power to local customers.</i></p> <p>Action 28.06-B: Rolling Blackout Warning System</p> <p><i>Work with local business and homeowner organizations to develop early notification and warning systems prior to planned power outages (e.g., "rolling blackouts").</i></p>	Public/Private Partnerships

Source: City of San Leandro 2002-2015 General Plan.

Voluntary Green Building Guidelines for Private Development

In 2006, the San Leandro City Council endorsed several leading guidelines developed by outside organizations for commercial and residential green building practices as well as sustainable landscaping. The endorsed guidelines include: 1) Build it Green GreenPoint Rated Guidelines (residential); 2) US Green Building Council (LEED) Guidelines (commercial); and 3) Sustainable Landscaping Guidelines. The guidelines are available on the City's web site. To help private developers and homeowners implement green building measures, several City of San Leandro staff members have completed technical training in green building, and the City maintains an informational kiosk showcasing green building materials and techniques in its Permit Center on the first floor of City Hall.

City of San Leandro Climate Action Plan

The City Council adopted the San Leandro Climate Action Plan in December 2009. Since January 2010 various City departments have carried out energy upgrades with Federal Stimulus funds, as well as other

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Federal, State and City resources. A Final Climate Action Plan will be transformed into a Sustainability Element for the General Plan at a future update.³⁰

The Climate Action Plan and GHG reduction measures and actions are structured around the four general categories of GHG emissions, as identified by the GHG inventory. They are:

- Energy use in buildings (Commercial/industrial, and residential)
- Transportation and land use
- Waste
- Municipal operations

The first three categories focus on programs and actions to influence the behavior of households and businesses in the community. Municipal operations encompass City facilities, fleet and waste operations, as the City has unique opportunities to directly control these emissions.

The City has taken various actions to date that reduce GHG emissions. The City joined 1,000 other U.S. cities, signing the U.S. Mayor's Climate Protection Commitment. The City has also joined the Alameda County Climate Protection Project and the U.S. Green Building Council, sponsored by StopWaste. San Leandro is a member of the countywide Energy Joint Powers Agency which is staffed by StopWaste.

Existing Conditions

Pacific Gas and Electric Company (PG&E) provides electricity and natural gas services to the City of San Leandro. PG&E is a publicly traded utility company which generates, purchases, and transmits energy under contract with the CPUC. PG&E owns and maintains above- and below-ground networks of electric and gas transmission and distribution facilities throughout the city. Both gas and electrical service is available throughout the Project site.

PG&E's 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 mountain range to the Pacific Ocean.

Electricity

PG&E's total service territory electricity distribution system consists of 141,215 circuit miles of electric distribution lines and 18,616 circuit miles of interconnected transmission lines. PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric 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 that link power plants with the PG&E system. The distribution system, comprised 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.

³⁰ City of San Leandro, 2014. Presentation to City Council on Climate Action Plan Update, <http://www.sanleandro.org/civicax/filebank/blobdload.aspx?blobid=14971>, accessed August 4, 2014.

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PG&E produces or buys its energy from a number of conventional and renewable generating sources, which travel through PG&E's electric transmission and distribution systems. The power mix PG&E provided to customers in 2012 consisted of non-emitting nuclear generation (21 percent), large hydroelectric facilities (11 percent) and eligible renewable resources (19 percent), such as wind, geothermal, biomass, solar and small hydro. The remaining portion came from natural gas/other (27 percent) and unspecified power (21 percent). Unspecified power refers to electricity that is not traceable to specific generation sources by any auditable contract trail. In addition, PG&E has plans to increase the use of renewable power. For instance, PG&E purchases power from customers that install small scale renewable generators (e.g., wind turbines or photovoltaic cells) up to 1.5 megawatts in size. In 2013, PG&E served 23.8 percent of their retail electricity sales with renewable power.³¹

PG&E's projected annual electricity demand growth between 2012 and 2024 is 1.25 percent.³² Energy providers in the State project demand by assuming future economic growth and take into account projects such as the San Leandro Shoreline Development Project.

Natural Gas

PG&E's natural gas (methane) pipe delivery system includes 42,141 miles of distribution pipelines, and 6,438 miles of transportation pipelines. Gas delivered by PG&E originates in gas fields in California, the US Southwest, US Rocky Mountains, and from Canada. Transportation pipelines send natural gas from fields and storage facilities in large pipes under high pressure. The smaller distribution pipelines deliver gas to individual businesses or residences.

PG&E gas transmission pipeline systems serve approximately 4.2 million gas customers in northern and central California. The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. A new program, the Pipeline 2020 program, aims to modernize critical pipeline infrastructure, expand the use of automatic or remotely-operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders.

The PG&E gas *transmission* pipelines nearest to the Project site are located approximately 0.5 mile to the east on Fairway Drive and parallel to Menlo Street on the Union Pacific Railroad right-of-way.³³

Distribution pipelines are located throughout the Project site.

4.14.4.2 STANDARDS OF SIGNIFICANCE

Appendix F, Energy Conservation, of the CEQA Guidelines, requires a discussion of the potential energy impacts of proposed projects; however, no specific thresholds of significance for potential energy impacts

³¹ California Public Utilities Commission (CPUC), 2014. California Renewables Portfolio Standard (RPS), <http://www.cpuc.ca.gov/PUC/energy/Renewables/index.htm>, accessed on August 4, 2014.

³² California Energy Commission (CEC), 2013. California Energy Demand 2014-2024 Preliminary Forecast, CEC-200-2013-004-SD-V2, May 2013.

³³ Pacific Gas & Electric (PG&E), 2014. Gas Transmission System Map web page, <http://www.pge.com/en/safety/systemworks/gas/transmissionpipelines/index.page>, accessed on August 4, 2014.

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are suggested in the State CEQA Guidelines or are established by the City of San Leandro. Therefore, this EIR analysis determined that impacts would be significant if the Project, upon buildout, would result in a substantial increase in natural gas and electrical service demands that would require the new construction of energy supply facilities and transmission infrastructure or capacity enhancing alterations to existing facilities. This parallels the threshold determinations for other utility and service systems under Appendix G of the State CEQA Guidelines. To further the intent of Appendix F, relevant, potential impacts listed in Appendix G are also incorporated in the evaluation.

Appendix F lists several impacts to energy conservation that may result from projects that are similar to the San Leandro Shoreline Development Project. These potential impacts represent a range of impacts, however, when assessing the potential impacts the analysis included in section 4.14.4.3, below focuses on discussions related to numbers 2, 4, and 5. Focus on these potential impacts was done because the Project does not represent a unique or energy-intensive use that would be substantially different than other development projects.

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

4.14.4.3 IMPACT DISCUSSION

This section analyzes the Project's potential impacts and cumulative impacts to electric and natural gas services and infrastructure, supply and demand, and energy conservation.

UTIL-11	Implementation of the Project would result in an increase in energy consumption.
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The Project, upon buildout, would result in the following: 150,000-square-foot office campus; 200 room hotel; 15,000-square-foot conference center; 354 housing units; 3 new restaurants (totaling 21,000 square feet); 2,500-square-foot community library; and parking structure (approximately 800 parking spaces). Other amenities include parkland, boat docks, pedestrian piers and pedestrian/bicycle paths.

The proposed increase in development would result in a long-term increase in energy demand, associated with the operation of lighting and space heating/cooling in the added building space, and vehicle travel. In

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In addition, construction activities associated with development require the use of energy (e.g., electricity and fuel) for various purposes such as the operation of construction equipment and tools, as well as excavation, grading, demolition, and construction vehicle travel.

Construction Energy Impacts

As discussed in Section 4.6, Greenhouse Gas Emissions, the EPA adopted the Heavy-Duty National Program to establish fuel efficiency and GHG emission standards in the heavy-duty highway vehicle sector, which includes combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). These standards include targets for gallons of fuel consumed per mile beginning in model year 2014. These standards are being extended through model year 2018 through current rulemaking by the EPA. While construction activities require a commitment of energy sources, these efficiency standards improve energy security and innovation in clean energy technology and further the goal of conserving energy in the context of project development. As a result, the project would result in a *less-than-significant* impact.

Operational Energy Impacts

Proposed new development would be constructed using energy efficient modern building materials and construction practices, in accordance with CalGreen Building Code, CPUC's Long Term Energy Efficiency Strategic Plan (2008), and the City's Green Building Ordinance (Chapter 3-19) and Green Building Checklist. The new buildings also would use new modern appliances and equipment, in accordance with the 2006 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608). In addition, the Project would be required to comply with the current CALGreen Building Code, which requires the use of recycled construction materials, environmentally sustainable building materials, building designs that reduce the amount of energy used in building heating and cooling systems as compared to conventionally built structures, and landscaping that incorporates water efficient irrigation systems. The City's Construction and Demolition Debris Waste Reduction and Recycling Requirements (Municipal Code, Chapter 3-7) establishes a more stringent requirement on recycling asphalt and concrete materials – 100 percent. Re-use of these materials (e.g., as road base) reduces energy consumption associated with new production of these materials. To the extent demolition materials are used on-site, further reductions in energy consumption are achieved as the need for off-site transport of materials is reduced.

In addition, Mitigation Measure GHG-1E would require the Project to achieve either the Build-it-Green GreenPoint Rated or US Green Building Council's Leadership in Energy and Environmental Design (LEED) standards that are endorsed by the City. Furthermore, Mitigation Measure GHG-1F requires the Project to include individual habitable residential and non-residential structures to be 15 percent more energy efficient than the current Building and Energy Efficiency Standards. The 15-percent reduction in building envelope energy use would be based on the current Building and Energy Efficiency Standards (Title 24, Part 6, of the California Building Code) that is in place at the time building permits are submitted to the City.

As an infill development effort, the Project inherently furthers objectives of energy conservation by focusing activities in areas of existing infrastructure and services. Other design features that incorporate energy efficiency principles include the 2-mile public, waterfront promenade with a Class I bike path, a Class II bike path on Monarch Bay Drive, the small boat launch facility, and kayak/paddleboard storage

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area. These elements all promote non-motorized transportation within and to the development, thereby potentially reducing energy consumption that would otherwise be related to motorized vehicle use (i.e., automobiles).

In addition, there are several General Plan policies, actions and strategies that ensure energy conservation is practiced in San Leandro. Compliance with the CALGreen Building Code and the other applicable state and local energy efficiency measures, cited above, would ensure that significant energy conservation and savings would be realized in the proposed new development. Even with the energy saving practices in place, it is possible that new electrical connections, switches and/or transformers might be required to serve new structures and/or carry additional loads within the Project site. However, the short-term construction-related potential environmental impacts (e.g., noise, air emissions, traffic impacts) from possible new electrical connections/switches/transformers within the Project site are not anticipated to be significant and, to the extent they may be necessary, are anticipated infrastructure improvements and part of the Project. Most of the work would be in existing public rights-of-way or facilities, and would be subject to compliance with applicable regulations and standard conditions of approval for construction projects, including City permits/review for construction within public rights-of-way (e.g., grading permits, private development review, encroachment permits, etc.). Failure to include mitigation measures included in Section 4.6, Greenhouse Gas Emissions that would serve to reduce energy consumption would increase potential impacts and would result in a *significant impact*.

Transportation Energy Impacts

Chapter 4.13, Transportation and Traffic, provides an evaluation of the expected traffic and transit trips generated by the Project. As discussed, the Project would potentially generate about 9,408 trips on a typical weekday of which 8,752 are new external vehicular trips. Of the external trips, 1,040 trips would occur during the weekday morning peak hour and 1,060 trips during the weekday evening peak hour. The Project is also projected to generate 909 trips during the Saturday midday hour of which 860 are new external trips.

As discussed above and in Chapter 4.6, Greenhouse Gas Emissions, the EPA adopted standards that include targets for gallons of fuel consumed per mile beginning in model year 2014. These standards are being extended through model year 2018 through current rulemaking by the EPA. While future transportation would require a commitment of energy sources, these efficiency standards improve energy security and innovation in clean energy technology and further the goal of conserving energy in the context of project development. In addition, Mitigation Measure GHG-1A and GHG-1B require residential developments to include electric vehicle charging with garages and electric vehicle charging stations would be required for hotel and office land uses. A failure to include these mitigation measures would increase potential impacts and would result in a *significant impact*.

Renewable Energy Impacts

The Project would be within the 70,000-square-mile PG&E service territory for electricity and natural gas generation, transmission and distribution. Due to the Project's size and location within an urban development, buildout of the Project would not significantly increase energy demands within the service territory and would not require new energy supply facilities or transmission infrastructure. In addition, development such as the Project is anticipated in the energy projections of energy providers within the

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State. As a result, new energy supply facilities and transmission infrastructure, or capacity-enhancing alterations to existing facilities, would not be required. Therefore, with consideration of the applicable regulations listed below, impacts related to energy conservation and utility electrical and gas facilities would be *less than significant*.

Applicable Regulations:

- National Energy Policy Act of 2005
- California (CEC's) 2006 Appliance Efficiency Regulations
- California Global Warming Solutions Act of 2006, Scoping Plan
- CAL Green Building Code
- City of San Leandro Green Building Checklist
- City of San Leandro Municipal Code, Chapter 3-19, The City's Green Building Ordinance
- City of San Leandro General Plan – Policies 28.01 (Conservation Advocacy), 28.02 (Planning and Building Practices), 28.03 (Weatherization), 28.04 (Local Energy Resources), 28.05 (Public Information and Education), and 28.06 (Reduce Peak Demand).
- City of San Leandro Climate Action Plan

Impact UTIL-11: Implementation of the Project would result in an increase in energy consumption.

Mitigation Measure UTIL-11: Implementation of Mitigation Measures GHG-1A through GHG-1F would increase energy conservation and reduce impacts resulting from energy generation.

Significance After Mitigation: Less than significant.

5. Significant Unavoidable Impacts

Section 15126.2 of the CEQA Guidelines requires that “direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long term effects.”

Chapter 1, Executive Summary, contains Table 1-1, which summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. While actions from the Project and mitigation measures, where feasible, would reduce the level of impact to less than significant, the following impacts would remain significant and unavoidable after mitigation measures are applied:

5.1 GREENHOUSE GAS EMISSIONS

- **GHG-1. Significant.** While mitigation measures have been identified to reduce greenhouse gas (GHG) emissions, such as providing electric vehicle charging stations, requiring installation of energy efficient appliances, and requiring employee trip commute reduction programs, to name a few, GHG emissions would continue to exceed the Bay Area Air Quality Management District (BAAQMD) regional significance thresholds; therefore, this impact would remain *significant and unavoidable*.
- **GHG-3. Significant.** Implementation of the Project would directly or indirectly generate GHG emissions that may have a cumulatively considerable impact on the environment. Although Mitigation Measures GHG-1A through GHG-1F would reduce GHG emissions to the extent practicable, emissions would continue to exceed the BAAQMD regional significance thresholds; therefore, the cumulative impact would remain *significant and unavoidable*.

5.2 NOISE

- **NOISE-2. Significant.** During construction, grading, and demolition activities that would use vibration-intense equipment such as pile driving, rock blasting, and vibratory rollers that would occur within 250 feet of existing residential, commercial, libraries, and hotel buildings, control measures would be implemented, such as considering alternative construction methods to reduce and/or minimize vibratory construction equipment where feasible, restricting vibration-intense construction activities to certain times, and inspection of structural components of existing structures prior to the use of vibratory equipment. However, it is unknown at this point if implementation of these measures would be feasible and if they would provide enough reduction to mitigate levels below thresholds. Therefore, this impact would remain *significant and unavoidable*.
- **NOISE-3. Significant.** The proposed single- and multi-family residential uses along Marina Boulevard west of Aurora Drive would experience a noise increase of 4.1 dBA for future scenarios due to Project-related traffic. According to San Leandro General Plan Policies 35.03 and 35.04, the noise level increase at residential uses along this segment would be considered a significant impact. Potential

SIGNIFICANT UNAVOIDABLE IMPACTS

mitigation measures included the construction of noise barriers along this road, or resurfacing this segment with rubberized asphalt; however, the construction of noise barriers along this road are not feasible as the residential areas front and access Marina Boulevard. Additionally, rubberized asphalt is only effective at roads in which cars travel at high speeds, and the speed limit in this area is low, thus, this solution would not be effective. Therefore, no feasible mitigation measures are available and this impact would be *significant and unavoidable*.

5.3 TRANSPORTATION AND TRAFFIC

- **TRAF-2A. *Significant*.** Although Mitigation Measures TRAF-2 would mitigate the impacts related to the reduction of level of service to an acceptable level on the I-880 northbound segment north of Davis Street, the mitigation measures are not considered feasible due to cost and right-of-way constraints associated with widening I-880. Further, the effectiveness of a shuttle service in reducing the number of Project trips cannot be adequately quantified. As such, this impact would remain *significant and unavoidable*.
- **TRAF-2B. *Significant*.** Mitigation Measures TRAF-2B.1 and TRAF-2B.2 would involve widening Doolittle Drive and providing shuttle service operating between the Project site and key locations such as the San Leandro and Coliseum BART stations and Oakland International Airport to reduce the V/C ratio on the northbound segment of Doolittle Drive, which would result in an acceptable Level Of Service under Year 2020 and 2035 conditions. While these measures would improve the level of service and mitigate the impact to less than significant, feasibility of these measures are uncertain due to right-of-way constraints along this corridor. Additionally, the shuttle service, though likely to reduce impacts, could not be quantified. As such, this impact would remain *significant and unavoidable*.
- **TRAF-7B. *Significant*.** Additional traffic associated with the Project would cause I-880 southbound ramps and Marina Boulevard (#14) to reduce to LOS E during both weekday AM and Saturday peak hours under Near-Term Cumulative Conditions. While Mitigation Measures TRAF-7B.1 and TRAF-7B.2 would improve level of service at this intersection, this ramp is under Caltrans jurisdiction; therefore, implementation and timing of these mitigation measures would not be within the City's jurisdiction and the impact would remain *significant and unavoidable*.
- **TRAF-7C. *Significant*.** The Project would cause operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) to reduce from LOS D to LOS E in the AM peak hour and would add to the unacceptable LOS F in the PM peak hour and cause the V/C ratio to increase by 0.07. While Mitigation Measures TRAF-7C.1 and TRAF-7C.2 are identified in the Kaiser Permanente San Leandro Medical Center/Mixed Use Retail Development Project EIR and would fully mitigate the Near-Term cumulative impact during the AM and PM peak hours, the available right-of-way on the northbound approach would not be sufficient to accommodate the two-left turn lanes, one through lane, and one shared through-right turn lane, as well as a bike lane. Therefore, this impact would remain *significant and unavoidable*.
- **TRAF-7I. *Significant*.** The Project would cause the operations at the intersection of I-880 southbound ramps and Marina Boulevard (#14) to reduce from LOS D to LOS E in the AM peak hour; and would reduce the level of service from LOS E to LOS F in the weekday PM and Saturday peak hours and cause the V/C ratios to increase by 0.10 during both periods, which is higher than the 0.05 allowed by the City. While Mitigation Measure TRAF-7I would lessen impacts, this ramp intersection is under Caltrans

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

jurisdiction and the implementation and timing of this mitigation measure are not under City control. As such, this impact would remain *significant and unavoidable*.

- **TRAF-7J. Significant.** The Project would add to the Long-Term Cumulative No Project substandard LOS F operations at the intersection of San Leandro Boulevard and Marina Boulevard (#18) and cause the v/c ration to increase by 0.07 in the AM peak hour and 0.10 in the PM peak hour. Although Mitigation Measures TRAF-7C.1 and 7C.2 would reduce the v/c ratios to a less-than-significant level by adding a northbound left-turn lane on San Leandro Boulevard and restriping lanes on the west leg to provide two corresponding receiving lanes, the available right-of-way would not be sufficient to accommodate the necessary northbound travel and bike lanes; therefore, this would remain a *significant and unavoidable* impact.

SIGNIFICANT UNAVOIDABLE IMPACTS

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6. Alternatives to the Project

6.1 INTRODUCTION

The following discussion is intended to inform the public and decision makers of feasible alternatives to the Project that would avoid or substantially lessen any of the significant effects of the Project. Section 15126.6 of the California Environmental Quality Act (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.

A “No Project” Alternative is required as part of the “reasonable range of alternatives” that could feasibly attain most or all of the project’s objectives. Each alternative is analyzed against the significance thresholds considered in Chapter 4, Environmental Evaluation. This chapter assesses whether the impacts of the alternatives would be greater than, less than, or similar to those of the Project.

6.2 OVERVIEW OF PROJECT ALTERNATIVES

The alternatives to the Project are described below. Table 6-1 provides a summary of the development program for each Alternative.

- **No Project Alternative.** Consistent with Section 15126.6(e)(2) of the CEQA Guidelines, under the No Project Alternative, the Project site would remain in its existing condition. Although existing land use designations and zoning would allow for some future development under existing conditions, this alternative was developed under the assumption that the Project site would not be further developed. Therefore, under this alternative, improvements proposed by the Project, such as adding new housing units, new restaurants, commercial and retail uses, a new parking structure, and public amenities, including a community library, aquatic center, and enhanced shorelines would not occur. As discussed in Chapter 3, Project Description, of this Draft EIR, the Marina would be maintained for as long as financially feasible; however, for purposes of the environmental analysis, it is assumed that the harbor master’s office, fuel pump/dock, and the 462 existing boat slips in the harbor basin would eventually be removed by the City. As such, under the No Project Alternative, the removal of the Marina would still occur as soon as it is no longer financially feasible for the City to maintain its operation.

ALTERNATIVES TO THE PROJECT

TABLE 6-1 COMPARISON OF THE PROPOSED PROJECT AND ALTERNATIVE BUILDOUT PROJECTIONS

Alternative	Added Population ^a	Residential Units ^b	Hotel Units	Office (SF)	Conference Center (SF)	Restaurant (SF) ^c	Public Amenities (SF) ^d
Proposed Project	970	354	200	150,000	15,000	21,000	2,500
No Project Alternative	0	0	0	0	0	0	0
Relocated Hotel Alternative	970	354	200	150,000	15,000	21,000	2,500
Reduced Density/Intensity Alternative ^e	728	265	150	112,500	11,250	15,750	1,875

a. Assumes an average household size of 2.74 persons per household. (354 residential units X 2.74 = 969.96 (approx. 970).

b. 354 proposed residential units includes 220 flats, 92 townhomes, and 42 single-family homes.

c. 21,000 square feet proposed restaurant space includes 3 restaurants including two at approximately 8,000 square feet and one at approximately 5,000 square feet.

d. The public amenities square footage only represents the approximately 2,500-square-foot community library/community meeting space and does not reflect square footage of other proposed public amenities as listed in Chapter 3, Project Description, of this Draft EIR.

e. The Reduced Density/Intensity Alternative would reduce the Project components by 25 percent.

- Relocated Hotel Alternative.** Under the Relocated Hotel Alternative, the proposed hotel would be relocated from its proposed location on Mulford Point Drive. Potential locations that could accommodate the hotel include the parking lot along Pescador Point Drive, which is southeast of the current proposed location, the parking lot along Mulford Point Drive, which is directly adjacent to the northeast of the proposed location, and on the corner of Monarch Point Drive and Monarch Bay Drive. Under this alternative, all other components of the Project would remain the same.
- Reduced Density/Intensity Alternative.** Under the Reduced Density/Intensity Alternative, Project components, including the office, retail, restaurant, convention center residential units, the community library and hotel rooms would be reduced by 25 percent over what is proposed under the Project. As such, Table 6-1 shows the buildout that would occur under this alternative.

6.3 ALTERNATIVES CONSIDERED INFEASIBLE

The following alternatives were considered infeasible and therefore were not further analyzed as alternatives in this chapter:

- Off-Site Alternative.** Under the Off-Site Alternative, the Project would be constructed at an off-site location. Due to the nature of the Project, which consists of redeveloping a previously developed shoreline, which is currently underutilized, this alternative would not provide the same opportunity for new development.
- Hotel Removal Alternative.** Under the Hotel Removal Alternative, the Project would not include construction of a new 200-room hotel. This alternative was considered given the number of hotels in the area of Oakland Airport, but as determined in the urban decay analysis (included in Appendix B), the inclusion of the hotel would not result in urban decay. As a result, removal of the hotel would not reduce a potentially significant impact. Additionally, this alternative does not meet the objectives of the Project.

ALTERNATIVES TO THE PROJECT

6.4 OBJECTIVES ASSESSMENT

In general, the Project objectives include redevelopment and enhancement of a portion of the San Leandro Shoreline Area to build an economically viable and vibrant mixed-use development that provides amenities and services to the citizens and visitors to San Leandro. As listed in the Chapter 3, Project Description, the objectives of the Project are to:

- Build an economically viable and vibrant mixed-use development which provides needed amenities and services to the citizens of the City of San Leandro, including:
 - A banquet/conference facility for residents and others to hold large parties such as weddings, graduation parties, Quinceañeras and other events in San Leandro. The banquet/conference center is also needed to support tournaments at the Tony Lema Golf Course.
 - A limited-service hotel, providing limited food and beverage service to hotel guests and not the general public.
 - Multiple dining options.
 - Housing units responsive to market demands to increase City housing stock, for above-moderate income units¹.
 - Class A office space to attract innovative businesses and quality jobs for the citizens of San Leandro.
 - An enhanced library/community building.
- Ensure the project uses are synergistic and create a regional destination for dining, lodging, entertainment and recreation.
- Provide recreation opportunities such as bocce ball courts, a small boat launch and public gathering spaces, a 20-foot-wide public promenade including lookout stations, to increase and enhance the public's access to the Bay.
- Provide multiple areas for the public to enjoy scenic views and interact with the San Francisco Bay.
- Enhance connections between the San Leandro Shoreline and the San Francisco Bay Trail.
- Remove current blight, including the former Blue Dolphin site pillars and fencing and the fenced former Boatworks site.
- Ensure the redeveloped portion of San Leandro Shoreline complements existing amenities and provides needed connection between the amenities and current shoreline uses.
- Ensure that development is provided in an environmentally sensitive manner, and promotes the latest trends in energy efficiency.
- Recognize the economic uncertainty of acquiring future funding for needed on-going channel and harbor dredging, the City's existing debt burden related to past harbor improvements, and the City's desire to plan for a successful transition from the existing blighted use to an environmentally and

¹ Housing units would be to satisfy 2014-2022 Regional Housing Needs Allocation (RHNA) housing target for above-moderate income units of 1,161 units.

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financially sustainable alternative that maintains the public's access to the harbor and San Francisco Bay.

6.4.1 NO PROJECT ALTERNATIVE

Although the No Project Alternative would allow for some development to occur under existing land use and zoning designations, as stated above, due to market uncertainties and the speculative nature of future development, this alternative assumes no further development would occur; therefore, enhanced and new public amenities are unlikely to be provided under the No Project Alternative. Further, this alternative would not result in an economically viable and vibrant mixed-use development. Therefore, the No Project Alternative would not meet the Project objectives.

6.4.2 RELOCATED HOTEL ALTERNATIVE

The Relocated Hotel Alternative would meet the Project objectives given that the overall development of proposed by the Project would still occur; however, the proposed hotel would be relocated. As mentioned above, potential locations that could accommodate the hotel include the parking lot along Pescador Point Drive which is southeast of the current proposed location, the parking lot along Mulford Point Drive which is directly adjacent to the northeast of the proposed location, and on the corner of Monarch Point Drive and Monarch Bay Drive. Overall, because of its similarities to the Project, this alternative would meet the Project objectives.

6.4.3 REDUCED DENSITY/INTENSITY ALTERNATIVE

The Reduced Density/Intensity Alternative would meet most of the Project objectives given that the same type of development would occur as the Project, with the exception of a 25 percent reduction in the density and intensity of the amount of development. As such, this alternative would meet all the Project objectives with the exception of meeting the City's RHNA of providing 1,161 above-moderate income housing units by 2022.

6.5 IMPACT ASSESSMENT

Each alternative is analyzed against the impact factors considered for the Project, according to whether it would have effects greater or less than the Project. The basis for the determinations is discussed in the next section of this chapter, where each of the topics is listed for each alternative.

6.5.1 NO PROJECT ALTERNATIVE

CEQA Guidelines Section 15126.6(e) requires that an EIR analyze a "no project" alternative. Under the No Project Alternative, the existing uses and buildings would remain unchanged, including continued operation of the marina. As mentioned above, the existing land use and zoning designations would allow for additional development under this alternative; however, due to market uncertainties and the speculative nature of future development, this alternative assumes no further development would occur.

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Under this alternative, the existing uses of the Project site include a 131-room Marina Inn, Horatio's Restaurant, and El Torito Restaurant would remain. Additionally, the 462-slip public boat harbor with separate boat launch and support operations, and two private yacht clubs would remain unchanged under this alternative. As mentioned in Chapter 3, Project Description, the harbor's occupancy currently stands at less than 30 percent. Further, the approximately 1,950 parking spaces throughout the Shoreline Recreational Area would remain unchanged. Under the No Project Alternative, proposed improvements such as removing the Marina, adding new housing units, new restaurants, commercial and retail uses, a new parking structure, and public amenities, including a community building/library, aquatic center, and enhanced shorelines would not occur.

6.5.1.1 AESTHETICS

Under the No Project Alternative, the existing uses of the Project site would remain the same, including continued operation of the Marina. With no changes, the existing character of the area would remain similar to existing conditions; however, in the absence of secured funding for dredging and continued maintenance of the Marina, the overall character regarding the Marina could be affected as a result of fewer boats able to access the harbor and continued degradation of the Marina. As a result, near-view vistas could be affected as a result of the Marina not being able to be adequately maintained in the long-term. The existing building site layout and landscaping would remain unchanged. Overall, this alternative would result in similar impacts when compared to the Project.

6.5.1.2 AIR QUALITY

Under the No Project Alternative, the Project site would remain in its existing condition, including continued operation of the Marina. Under this alternative, there would be no enhancements and redevelopment as proposed by the Project, such as new residential units, new hotel, removal of the Marina, and pedestrian amenities would not be constructed. As such, this alternative would not place new sensitive receptors, such as residents and hotel guests, at the Project site. Although continued operation of the Marina would result in continuing air emissions from boat engines, there would be no new vehicle trips generated and no construction activity under this alternative that would otherwise occur under the Project. Overall, this alternative would result in impacts less than those of the Project.

6.5.1.3 BIOLOGICAL RESOURCES

Under this alternative, the Project site would remain in its existing condition, including continued operation of the Marina. Under this alternative, there would be no enhancements and redevelopment as proposed by the Project and this alternative would not result in any construction activity and related impacts that would otherwise occur under the Project. Although this alternative would still pose the potential for environmental impacts associated with fuel spills and/or leaks in the Marina which could result impacts to marine habitat, continued compliance with existing regulations related to the handling of hazardous materials would ensure the continued safe handling of fuels as they relate to Marine activities, such as fueling of pleasure crafts. Overall, the No Project Alternative would result in impacts less than those of the Project regarding biological resources.

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6.5.1.4 CULTURAL RESOURCES

The No Project Alternative would result in the Project site remaining in its existing condition with no future development assumed. As such, there would be no construction activity and, therefore, would not result in any ground disturbance within the Project site. As a result, the existing on-site monuments (a mosaic depicting the oyster beds associated with CHL #824; a plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel; and a Lost Boats Memorial placed in memory of USS Argonaut and the USS Grampus) would not be disturbed. In addition, the potential for disturbing or uncovering any not yet discovered cultural resources on the Project site would be avoided. Therefore, the No Project Alternative would result in impacts less than those of the Project regarding cultural resources.

6.5.1.5 GEOLOGY, SOILS, AND SEISMICITY

Under the No Project Alternative, no grading or excavation would occur on the Project site. However, as discussed in Chapter 4.5, Geology, Soils, and Seismicity, large earthquakes could generate strong to violent ground shaking at the Project site which could result in damage to existing structures. Although this alternative would not result in any new development and, therefore, would likely result in fewer on-site employees and residents, the potential for ground shaking and exposure of existing structures and on-site employees and residents would result in this alternative having similar impacts as the Project.

6.5.1.6 GREENHOUSE GAS EMISSIONS

Under the No Project Alternative, the existing Project site would remain unchanged and continue to operate under its current condition, including the Marina. Under this alternative, construction under the Project, including a new 200-room hotel, 354 residential units, removal of the marina, and public amenities would not be constructed and surface parking lots along the perimeter of the marina would remain unchanged. This alternative would not generate additional vehicle trips as under the Project, nor would new structures be constructed, which would increase greenhouse gas (GHG) emissions during the operational phase. Therefore, the No Project Alternative would result in impacts less than those of the Project.

6.5.1.7 HAZARDS AND HAZARDOUS MATERIALS

Under this alternative, the Project site would remain unchanged and continue to operate under its current condition. Given that there would be no ground-disturbing activity under the No Project Alternative because no new construction would occur, existing hazardous materials would remain in use resulting from day-to-day operations that currently exist. Existing activities include, but are not limited to, operation of the marina, restaurants, and surface parking lots. Under this alternative, the Marina would continue to operate, which could result in exposure of hazardous materials related to marina operations, including marine fuel and oil, whereas, under the Project the Marina would be removed and, therefore, reduce potential exposure of marine-related hazardous materials associated with marina operations. Overall, this alternative would result in similar impacts as the Project given the continued operation of the marina.

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6.5.1.8 HYDROLOGY AND WATER QUALITY

There would be no potential for water quality impacts, such as siltation, erosion and hazardous material spills, associated with construction activities under the No Project Alternative and the existing stormwater drainage system as described in Chapter 4.8, Hydrology and Water Quality, would continue to operate. However, under this alternative, the Marina would continue to operate under existing conditions, which could impact water quality from potential exposure of marine-related hazardous materials from day-to-day operations of a marina. In addition, the inherent water quality benefits of the Project complying with C.3 and NPDES requirements would not be implemented. As a result, continued operations and activities at the Project site would not have water runoff requirements implemented, and this alternative could also result in continued impacts to hydrology and water quality. As a result, the No Project Alternative would have greater impacts than the Project.

6.5.1.9 LAND USE AND PLANNING

The No Project Alternative would not physically divide an existing community, because it would remain physically unchanged from its existing condition. Under this alternative, although existing land use and zoning designations would allow for some development to still occur on the Project site, it is assumed that no future development would occur under this alternative. Further, this alternative would not result in the construction of Class II bicycle lanes on Monarch Bay Drive between Neptune Drive and Fairway Drive as proposed by the Project. Overall, given that no future development is likely to occur under the No Project Alternative, this alternative would result in impacts less than those of the Project.

6.5.1.10 NOISE

The No Project Alternative would not result in any changes to existing conditions and temporary noise and vibration as a result of construction related activities under the Project would not occur. Therefore, this alternative would result in impacts less than those of the Project.

6.5.1.11 POPULATION AND HOUSING

This alternative would not increase population or housing units compared to the Project. As discussed in Chapter 4.11, Population and Housing, the San Leandro General Plan anticipated the substantial growth in housing and employment proposed as part of the Project. Additionally, the amount of direct and indirect growth anticipated would not exceed Association of Bay Area Governments (ABAG) projections and the anticipated growth was adequately planned for in the San Leandro General Plan. Overall, the Project would result in less-than-significant impacts. Further, while the removal of the Marina under the Project would displace the approximate 10 units that consist of housing for approximately 10-16 people living on boats in the Marina, is nominal and was found to be less than significant. Under this alternative, no new housing would be constructed and the proposed 354 residential units would not be built. However, the existing 10 units consisting of housing on boats would not be displaced under this alternative. Overall, this alternative would result in impacts less than those of the Project as it would not result in the displacement of existing housing units or residents.

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6.5.1.12 PUBLIC SERVICES AND RECREATION

The No Project Alternative would not result in any changes to existing conditions of the Project site. Under this alternative, there would be no new construction or enhancement of the Project site that would result in an increase to the overall number of structures and/or permanent population and service population. As such, this alternative would not result in any impacts to existing police and emergency services, fire protection services, libraries, and/or schools serving the Project site. Although less-than-significant impacts with regard to public services and recreation were identified, the Project would result in 354 residential units, new structures, including a hotel, new public amenities, and approximately 970 new residents, which would result in additional calls for public services. Additionally, this alternative would not result in an overall reduction in total parkland or result in the reconfiguration of the Marina 9-hole Golf Course, whereas, the Project would result in the reconfiguration of portions of the Marina Golf Course to accommodate residential units at its northwestern and southern edge. Overall, as described in Chapter 4.12, Public Services and Recreation, the reduction and addition of public amenities would essentially result in a neutral impact on parkland in San Leandro. This alternative would result in impacts less than those of the Project.

6.5.1.13 TRANSPORTATION AND TRAFFIC

As discussed in Chapter 4.13, Transportation and Traffic, the Project would not result in significant impacts to bicycle and pedestrian facilities given that it would construction of Class II bicycle lanes on Monarch Bay Drive between Neptune Drive and Fairway Drive; therefore, would not conflict with the San Leandro Bicycle and Pedestrian Master Plan and the Alameda Countywide Bicycle Plan. Additionally, the Project would include pedestrian paths along Monarch Bay Drive south of Mulford Point Drive. Under the No Project Alternative, the Project site would remain unchanged and no future development would occur, including the installation of Class II bike lanes and pedestrian paths along Monarch Bay Drive. As such, there would continue to be limited pedestrian facilities and bicycle lanes along Monarch Bay Drive. However, under this alternative, there would not be new structures or public amenities constructed and therefore would not result in an increase in pedestrian and vehicular traffic that would occur under the Project. Further, vehicle traffic associated with the Project would cause several intersections to operate at unacceptable levels of service, as discussed in Chapter 4.13 of this Draft EIR. Overall, the No Project Alternative would result in impacts less than those of the Project, as it would not result in additional vehicle trips which would cause unacceptable levels of service at some of the intersections on or near the Project site.

6.5.1.14 UTILITIES AND SERVICE SYSTEMS

The No Project Alternative would result in lower demand for water and wastewater treatment. Under this alternative, the Project site would remain in its existing condition and no future development or public amenities would be constructed as proposed by the Project. The Project would include construction of a new 200-room hotel and approximately 354 residential units, which would increase demand for water, generate additional wastewater, solid waste and energy demand. Under this alternative, however, development would not occur and demand for services would not increase. This alternative would result in impacts less than those of the Project.

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6.5.2 RELOCATED HOTEL ALTERNATIVE

Under this alternative, the hotel proposed by the Project would be relocated from its proposed location on Mulford Point Drive. Although Chapter 4.1, Aesthetics, of this Draft EIR, found less-than-significant impacts with regard to the hotel's impact on the character of the site and its surroundings as well as a less-than-significant impact on a scenic vista, the Relocated Hotel Alternative is considered to address concerns raised by the public regarding the location of a hotel on Mulford Point. Potential locations that could accommodate the hotel include the parking lot along Pescador Point Drive, southeast of the current proposed location, the parking lot along Mulford Point Drive which is directly adjacent to the northeast of the proposed location, and on the corner of Monarch Point Drive and Monarch Bay Drive. Under this alternative, all other components proposed by the Project, such as square footage, residential units, hotel rooms, and other development of the Project would remain the same.

As a result of the similarities between the Project and this alternative, the assessment of impacts for this alternative is limited to resource topic areas that would be affected by the relocation of the hotel. In this case, only aesthetics would be affected due to the relocation of the hotel. As such, impacts to the resource topic areas listed below would be the same under both the Project and this alternative because the area of disturbance would be similar and the regulatory conditions and mitigation measures identified in Chapters 4.2 through 4.14 would still apply.

- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation and Traffic
- Utilities and Service Systems

6.5.2.1 AESTHETICS

As shown above in Table 6-1, the Relocated Hotel Alternative would result in the same square footages and project components as proposed under the Project. However, under this alternative, the proposed 200-room hotel would be relocated to a site other than at the end of Mulford Point Drive, where it's currently proposed. As described above, sites that could potentially accommodate the hotel include Pescador Point Drive where there's currently a surface parking lot, or at the corner of Monarch Bay Drive and Mulford Point Drive at the current location of a surface parking lot. Although the Project was found to have a less-than-significant impact on community character, relocation of the hotel would open up views from most public viewpoints looking west across the harbor to Mulford Point and to San Francisco Bay and the San Francisco Peninsula beyond. Relocation of the hotel could potentially obstruct public viewpoints from other areas as well; however, relocation of the hotel from its proposed location would

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still open up public views looking west given that the proposed location would remain undeveloped under this alternative. Overall, this alternative would result in impacts less than those of the Project regarding aesthetics.

6.5.3 REDUCED DENSITY/INTENSITY ALTERNATIVE

A Reduced Density/Intensity Alternative is considered in order to reduce potential impacts to air quality, GHG emissions, noise, population and housing, and traffic that were identified for the Project. Under this alternative, development would occur as described in Chapter 3, Project Description; however, the commercial and convention center areas, residential units, and hotel units would be reduced by 25 percent, as shown above in Table 6-1. This alternative would not reduce the size of the parking garage or the new library/community center. Although this alternative would reduce the overall density/intensity at buildout, the same improvements, land uses, and overall development proposed under the Project would still occur.

6.5.3.1 AESTHETICS

As shown in Table 6-1 above, the Reduced Density/Intensity Alternative would reduce overall development in terms of units and square-footage by 25 percent. The overall type and pattern of development would remain similar to the Project, including construction of a new hotel, residential units, public amenities, and the removal of the Marina. The reduction in hotel rooms under this alternative could allow for a smaller footprint, lower building height, or a break in the mass of the hotel building, and as a result could slightly reduce potential public view impacts looking west as a result of a smaller overall footprint. As discussed in Chapter 4.1, Aesthetics, the Project would result in less-than-significant aesthetic impacts. Although a reduction in the overall intensity and density of development would reduce the overall amount of units and square footage developed, the types and locations of development would still remain similar to the Project. As such, this alternative would result in similar impacts to the Project with respect to aesthetics.

6.5.3.2 AIR QUALITY

Under this alternative, development would still occur similar to the Project but this alternative would result in a 25 percent reduction in the non-residential square footage and residential units proposed. The total criteria air pollutants emissions associated with the Project and the Reduced Density/Intensity Alternative are shown in Table 6-2. The 25 percent reduction in building square footage and units would reduce vehicle trips, mobile-source, and stationary-source emissions. Additionally, the reduction in land use development would reduce short-term emissions related to project construction activities. As discussed in Chapter 4.2, Air Quality, the Project would result in less-than-significant impacts to air quality (construction-related criteria air pollutants, operational phase criteria air pollutants, construction-related community risk and hazards, and operational-related community risk and hazards).

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TABLE 6-2 SAN LEANDRO SHORELINE DEVELOPMENT PROPOSED PROJECT AND REDUCED DENSITY/INTENSITY ALTERNATIVE CRITERIA AIR POLLUTANTS EMISSIONS FORECAST

Category	Criteria Air Pollutants (average lbs/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Existing				
Area ^a	22	<1	<1	<1
Energy ^a	<1	1	<1	<1
On-Road Mobile Sources ^a	10	30	19	5
Boats (Pleasure-Crafts) ^b	144	49	9	9
Total	176	80	28	14
Proposed Project				
Area ^a	48	<1	<1	<1
Energy ^a	<1	4	<1	<1
On-Road Mobile Sources ^a	27	82	52	15
Total	75	86	52	15
Change from 2014 Land Uses	-101	7	25	1
BAAQMD Average Daily Project-Level Threshold	54	54	82	54
Exceeds Average Daily Threshold	No	No	No	No
Reduced Density/Intensity Alternative				
Area ^a	41	<1	<1	<1
Energy ^a	<1	3	<1	<1
On-Road Mobile Sources ^a	21	62	40	11
Total	62	66	40	12
Change from 2014 Land Uses	30	35	21	6
BAAQMD Average Daily Project-Level Threshold	54	54	82	54
Exceeds Average Daily Threshold	No	No	No	No
Change from Proposed Project (Average Daily)	-13	-20	-12	-4

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TABLE 6-2 SAN LEANDRO SHORELINE DEVELOPMENT PROPOSED PROJECT AND REDUCED DENSITY/INTENSITY ALTERNATIVE CRITERIA AIR POLLUTANTS EMISSIONS FORECAST

Category	Criteria Air Pollutants (tons/year)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Existing Tons per Year (tpy)	32	15	5	3
Proposed Project Tons per Year (tpy)	14	16	10	3
Change from 2014 Land Uses	-18	1	5	<1
BAAQMD Annual Project-Level Threshold	10 tpy	10 tpy	15 tpy	10 tpy
Exceeds Annual Threshold	No	No	No	No
Reduced Density/Intensity Alternative Tons per Year (tpy)	11	12	7	2
Change from 2014 Land Uses	-21	-2	2	<-1
BAAQMD Annual Project-Level Threshold	10 tpy	10 tpy	15 tpy	10 tpy
Exceeds Annual Threshold	No	No	No	No
Change from the Project (Annual)	-2	-4	-2	-1

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014). Assumes all fireplaces are gas-burning fireplaces in accordance with BAAQMD Regulation 6, Rule 3.

New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014). Average daily emissions are based on the annual operational emissions divided by 365 days.

Sources:

a. CalEEMod 2013.2. Based on year 2020 emission rates. No trip generation is assumed for the 140 boat residences.

b. Starcrest, 2005. Port of Los Angeles Baseline Air Emissions Inventory.

As shown in Table 6-2, this alternative would also result in less-than-significant operational phase criteria air pollutant emission impacts and this alternative would result in reduced operational-phase emissions as compared to the Project. Likewise, construction emissions would be less than that identified for the Project; and with mitigation would be less than significant. Therefore, the potential to impact air quality would also be reduced beyond what was considered under the Project.

Although the overall type of development would remain similar to the Project and impacts were found to be less than significant, reduced development under this alternative would further reduce long- and short-term pollutant emissions; therefore, would result in impacts less than those of the Project.

6.5.3.3 BIOLOGICAL RESOURCES

Under this alternative, development would still occur similar to the Project with the exception of a 25 percent reduction in the square footages and units proposed. A reduction in intensity and density would reduce the overall amount of residential units, hotel rooms, and square footages of new structures, which could ultimately result in fewer areas of ground disturbance, and habitat loss due to trees and landscape being altered throughout buildout. While the overall types and locations of development would still occur as proposed, with the exception of a 25 percent reduction in overall density and intensity, this alternative would result in impacts less than those of the Project.

ALTERNATIVES TO THE PROJECT**6.5.3.4 CULTURAL RESOURCES**

Under this alternative, development would still occur similar to the Project with the exception of a 25 percent reduction in the square footages and units proposed. A reduction in intensity and density could result in fewer areas of ground disturbance, and therefore reducing the potential to disturb any cultural resources that may be present on the Project site that have yet to be discovered. Similar to the Project, this alternative would require the on-site monuments (a mosaic depicting the oyster beds associated with CHL #824; a plaque commemorating the dedication of the San Leandro channel as the Jack D. Maltester Channel; and a Lost Boats Memorial placed in memory of USS Argonaut and the USS Grampus) to possibly be disturbed in order to allow for development. Mitigation measures included in Chapter 4.4, Cultural Resources, would still apply under this alternative; therefore, potential impacts would be less than significant. Overall, this alternative would result in impacts less than those of the Project.

6.5.3.5 GEOLOGY, SOILS, AND SEISMICITY

Under the Reduced Density/Intensity Alternative, development would still occur similar to the Project with the exception of a 25 percent reduction in the square footages and units proposed. As discussed in Chapter 4.5, Geology, Soils, and Seismicity, large earthquakes could generate strong to violent ground shaking at the Project site which could result in damage to existing and proposed structures. Additionally, erosion and/or loss of topsoil could result from ground disturbance and excavation from construction activities, as well as coastal erosion due to the Project site's proximity to the ocean which subjects it to wave attack. Although no areas of significant coastal erosion were observed within the Project site, existing erosion control may be required to ensure continued stability of the coastline. Although Chapter 4.5 identified potentially significant impacts with respect to geology and soils, they were reduced to less-than-significant levels with mitigation measures. Although this alternative would result in the same overall type of development proposed under the Project, it would reduce the amount of development by 25 percent therefore reducing the amount of structures susceptible to earthquakes. As such, this alternative would result in impacts less than those of the Project.

6.5.3.6 GREENHOUSE GAS EMISSIONS

Under this alternative, development would still occur similar to the Project but this alternative would result in a 25 percent reduction in the non-residential square footage and residential units proposed. The total GHG emissions associated with the Project and the Reduced Density/Intensity Alternative are shown in Table 6-3. The reduction in units would result in fewer vehicle trips generated upon buildout of the Project, which would reduce the total amount of GHGs emitted. Additionally, GHG emissions from stationary sources and energy usage would be reduced compared to the Project due to the reduction in building square footage. Overall, under the Reduced Density/Intensity Alternative, total GHG emissions from stationary and mobile sources and energy use would be substantially reduced by 3,023 MTCO₂e compared to the Project.

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TABLE 6-3 SAN LEANDRO SHORELINE DEVELOPMENT PROPOSED PROJECT AND REDUCED DENSITY/INTENSITY ALTERNATIVE GHG EMISSIONS COMPARISON

Category	GHG Emissions (MTCO ₂ e/Year)		
	Proposed Project	Alternative	Difference
Operational Emissions			
Area ^a	37	17	-20
Energy ^a	3,060	2,522	-538
On-Road Mobile Sources ^a	10,027	7,650	-2,377
Waste ^a	355	284	-71
Water/Wastewater ^a	73	56	-17
Total	13,552	10,529	-3,023
Total without Waste ^b	13,197	10,245	-2,952
Service Population (SP) ^c	1,973	1,505	-468
MTCO ₂ e/SP	6.7	6.8	0.1
BAAQMD Efficiency Threshold	4.6 MTCO ₂ e/SP	4.6 MTCO ₂ e/SP	—
Exceeds BAAQMD Target?	Yes	Yes	—

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014). Assumes all fireplaces are gas-burning fireplaces in accordance with BAAQMD Regulation 6, Rule 3.

a. CalEEMod 2013.2.2. Based on year 2020 emission rates.

b. BAAQMD did not include solid waste emissions when developing the per capita significance thresholds. Therefore, total GHG emissions with and without the Waste Generation sector are included. If these emissions are included in the analysis for the Project, Project per capita emissions would be 6.9 MTCO₂e/SP/yr. If these emissions are included in the analysis for the Alternative, Alternative per capita emissions would be 7.0 MTCO₂e/SP/yr.

c. The Project's service population (SP) is based on 970 residents and 1,003 employees. This Alternative's service population (SP) is based on 729 residents and 776 employees.

However, GHG emissions impacts of the Project are based on BAAQMD's efficiency metric, which is a per capita measure of GHG emissions impacts of a project. The Project would have a GHG emissions efficiency of 6.7 MTCO₂e/SP while this alternative would have a GHG efficiency of 6.8 MTCO₂e/SP, which is slightly higher than the Project. Therefore, this alternative would be less efficient than the Project. Due to the scale of development that would still occur under this alternative, short- and long-term GHG emissions would still substantially cumulatively contribute to climate change impacts. Therefore, GHG impacts would remain significant and unavoidable under both the Project and this alternative, and this alternative would result in impacts greater than those of the Project regarding GHG emissions impacts.

6.5.3.7 HAZARDS AND HAZARDOUS MATERIALS

As discussed in Chapter 4.7, Hazards and Hazardous Materials, the Project would result in less-than-significant impacts. Under this alternative, the same project components would continue to be built as under the Project, with the exception of reducing overall development density and intensity by 25 percent. Although commercially available hazardous materials would be used at various construction sites within the Project site and may generate small amounts of hazardous waste, the waste would be handled in accordance with applicable federal, State, and local laws. Further, the Project site is within the Alameda County Airport Land Use Commission jurisdiction due to its close proximity to the Oakland International

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Airport. Compliance with the Airport Land Use Compatibility Plan regulations would ensure that future development does not interfere with any air traffic. Overall, given that this alternative would result in the same overall type of development on the Project site, impacts would be similar to the Project.

6.5.3.8 HYDROLOGY AND WATER QUALITY

Under the Reduced Density/Intensity Alternative, the type of development would occur on the Project site as proposed by the Project, with the exception of a 25 percent reduction in the overall density and intensity of development. As such, the hydrology and water quality impacts would be slightly reduced. As discussed in Chapter 4.8, Hydrology and Water Quality, the Project would result in less than significant impacts to hydrology and water quality. Given this alternative would reduce the overall amount of development by 25 percent; this alternative would result in smaller building footprints, thereby allowing for larger areas of pervious surfaces. Although the overall type of development would remain similar to the Project and impacts were found to be less than significant, reduced development under this alternative would further minimize potential impacts to hydrology and water quality; therefore, would result in impacts less than those of the Project.

6.5.3.9 LAND USE AND PLANNING

Under the Reduced Density/Intensity Alternative, the type of development would occur on the Project site as proposed by the Project, with the exception of a 25 percent reduction in the overall density and intensity of development. As described in Chapter 4.9, Land Use and Planning, the project components largely represent intensification of existing uses on the Project site, and would not have the potential to physically divide the site. Further, Project components include circulation improvements and neighborhood serving uses that would serve to reduce the potential division of surrounding community. Additionally, the installation of Class II bicycle lanes along Monarch Bay Drive between Neptune Drive and Fairway Drive within the Project site area would ensure compliance with the San Leandro Bicycle and Pedestrian Master Plan. All required entitlements and permits required for the Project would be required under this alternative. Overall, given this alternative would result in the same type and extent of development as the Project, impacts related to land use and planning would be similar.

6.5.3.10 NOISE

Under the Reduced Density/Intensity Alternative, the type of development would occur on the Project site as proposed by the Project, with the exception of a 25 percent reduction in the overall density and intensity of development. In general, the same type of construction activities and operation as described in Chapter 4.10, Noise, would continue to occur under this alternative. As discussed in Chapter 4.10, potentially significant impacts would result from vibration impacts during construction activities, as well as permanent noise increases from vehicle traffic along Marina Boulevard west of Aurora Drive. Although Mitigation Measure NOISE-2 in Chapter 4.10 would reduce construction related noise and vibration impacts to the extent feasible, a significant and unavoidable impact would remain from the permanent increase in traffic generated noise along Marina Drive and because implementation of Mitigation Measure NOISE-2 is not known at this point if it would provide enough reduction to mitigate levels below thresholds. Although traffic generation and population would be reduced as a result of less density and intensity under this alternative, there would still be an increase in permanent ambient noise levels that would likely exceed the 3 dB standard established under Policy 35.04, Degradation of Ambient Noise

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Levels, in the Environmental Hazards Element of the San Leandro General Plan. Overall, this alternative would result in the same type of development as the Project, and impacts related to noise would be similar to the Project, including the identified significant unavoidable impact.

6.5.3.11 POPULATION AND HOUSING

Under this alternative, the same type of development would occur as the Project, with the exception of a 25 percent reduction in density and intensity in the amount of development. As shown in Table 6-1, this alternative would result in a population increase of approximately 728, approximately 265 residential units, and approximately 150 hotel units. As discussed in Chapter 4.11, Population and Housing, while the removal of the marina under the Project could displace the approximately 16 to 20 residents living in 10 boats in the harbor, the displacement is nominal and was found to result in a less-than-significant impact. Under this alternative, approximately 265 new housing would be constructed. This increase in housing units is less than what would be constructed under the Project. Although this alternative would result in the displacement of approximately 10 housing units with removal of the marina, there would still be a net increase in housing units under this alternative. Overall, this alternative would result in similar impacts to the Project.

6.5.3.12 PUBLIC SERVICES AND RECREATION

Under the Reduced Density/Intensity Alternative, the same type of development would occur as the Project, with the exception of a 25 percent reduction in density and intensity in the amount of development. As such, this alternative would result in less population and employee generation, as well as less residential and hotel units as shown above in Table 6-1. Although this alternative would result in an overall reduction in population and amount of development, an increase in the demand for public services, such as fire and police protection, as well as emergency medical services, parks, libraries, and schools would still occur. However, as discussed in Chapter 4.12, Public Services and Recreation, less than significant impacts would occur for fire protection and police services, schools, parks, and the Mulford-Marina library considering the Project. Given this alternative would reduce the overall amount of development and population and employee generation, the Reduced Density/Intensity Alternative would further minimize potential impacts to public services and recreation serving the Project site. As such, this alternative would result in impacts less than those of the Project.

6.5.3.13 TRANSPORTATION AND TRAFFIC

The Reduced Density/Intensity Alternative would result in the same type of development as the Project, with the exception of a 25 percent reduction in density and intensity of development. Under this alternative, total vehicle trip generation would be reduced over the Project. This alternative would generate approximately 6,637 trips, whereas the Project would generate approximately 7,177 vehicle trips. As discussed in Chapter 4.13, Transportation and Traffic, there would be six significant and unavoidable impacts resulting from the Project. Although there are mitigation measures identified, some may be considered infeasible due to that uncertainty. In general, this alternative would result in the same type of development as the Project, and although a reduction on trips generated would occur under this alternative, the 25 percent reduction is not likely to result in a substantial reduction in traffic and transportation impacts, and significant unavoidable impacts would remain. However, the reduction in trips

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generated under this alternative would still result in impacts less than those of the Project regarding transportation and traffic.

6.5.3.14 UTILITIES AND SERVICE SYSTEMS

The Reduced Density/Intensity Alternative would result in the same type of development as the Project, with the exception of a 25 percent reduction in density and intensity of the amount of development. As such, this alternative would reduce the increase in population, residential units, hotel units, and public amenities, thereby reducing the overall impact to utilities and service systems. As discussed in Chapter 4.14, Utilities and Service Systems, the Project would result in a less-than-impact to sanitary wastewater, solid waste, and energy. Given that this alternative would reduce the level of development proposed by the Project, impacts to utilities and service systems would therefore be less than those of the Project.

6.5.4 ALTERNATIVES COMPARISON

Table 6-4 compares the impact of each alternative to impacts associated with the proposed project.

TABLE 6-4 COMPARISON OF PROJECT ALTERNATIVES

Topic	No Project	Relocated Hotel Alternative	Reduced Density/Intensity Alternative
Aesthetics	0	-	0
Air Quality	-	0	-
Biological Resources	-	0	-
Cultural Resources	-	0	-
Geology and Soils	0	0	-
Greenhouse Gas Emissions	-	0	+
Hazards and Hazardous Materials	0	0	0
Hydrology and Water Quality	+	0	-
Land Use and Planning	-	0	0
Noise	-	0	0
Population and Housing	-	0	0
Public Services & Recreation	-	0	-
Transportation and Traffic	-	0	-
Utilities and Service Systems	-	0	-

Note: + Indicates that the alternative impact is greater when compared to the Project
 0 Indicates that the alternative is similar to the proposed project
 - Indicates that the alternative impact is less when compared to the Project.

ALTERNATIVES TO THE PROJECT

6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the Project and the Alternatives, Section 15126.6 of the CEQA Guidelines requires that an “environmentally superior” alternative be selected and the reasons for such a selection be disclosed. The environmentally superior alternative is the alternative that would be expected to generate the least amount of significant impacts. Identification of the environmentally superior alternative is an informational procedure and the alternative selected may not be the alternative that best meets the goals or needs of the City of San Leandro.

As shown in Table 6-4, the No Project Alternative would have the fewest environmental impacts as compared to the other two alternatives, and would therefore be the environmentally superior alternative. However, in accordance with State CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the CEQA-required No Project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. Accordingly, the next environmentally superior alternative would be the Reduced Density/Intensity Alternative because, as shown in Table 6-4, this alternative would reduce the overall development density and intensity by 25 percent which would result in slightly less development and less traffic generation at buildout. This alternative would also meet all of the Project Objectives with the exception of meeting the City’s Regional Housing Needs Assessment to provide 1,161 above-moderate income housing units by 2022. Therefore, the Reduced Density/Intensity Alternative is considered the environmentally superior alternative.

7. CEQA Mandated Sections

This chapter provides an overview of the impacts of the Project based on the analyses presented in Chapters 4.0 through 5.0 of this Draft 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 Project would have on the environment, and proposed mitigation measures to minimize significant impacts, are provided in Chapters 4.0 through 4.14.

7.1 IMPACTS NOT FOUND TO BE SIGNIFICANT

CEQA Guidelines Section 15128 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 impacts to agriculture and forestry, and mineral resources, potentially resulting from buildout of the Project, would be less than significant.

7.1.1 AGRICULTURE AND FORESTRY RESOURCES

The Project is located in the City of San Leandro in the San Leandro Shoreline Area, a highly urbanized city within Alameda County. The City of San Leandro General Plan states that commercial agriculture in the City has largely ceased.¹ The San Leandro General Plan, General Plan map, and Zoning map do not identify any agriculture or forestry resources within the city. As such, buildout of the Project would have no impact on forestland or forestry resources.

7.1.2 MINERAL RESOURCES

The Project is located in the City of San Leandro in the San Leandro Shoreline Area, a highly urbanized city within Alameda County. According to the City of San Leandro General Plan, the City’s principal mineral resources are volcanic rock, such as basalt, andesite, and rhyolite. San Leandro’s only quarry, located east of the city limit on Lake Chabot Road, and approximately 5.5 miles east of the Project site, ceased operation in the 1980s.² While the quarry site does contain additional rock resources, future quarrying activity is unlikely due to the potential environmental impacts and stringent permitting requirements, according to the San Leandro General Plan.³ As such, buildout of the Project would have no impact on mineral resources.

¹ City of San Leandro General Plan, Chapter 5, Open Space, Parks, and Conservation, page 5-20.

² City of San Leandro General Plan, Chapter 5, Open Space, Parks, and Conservation, page 5-21.

³ City of San Leandro General Plan, Chapter 5, Open Space, Parks, and Conservation, page 5-21.

CEQA MANDATED SECTIONS

7.2 SIGNIFICANT IRREVERSIBLE CHANGES DUE TO THE PROPOSED PROJECT

Section 15126.2(c) of the CEQA Guidelines requires an EIR to discuss the extent to which the Project would commit nonrenewable resources to uses that future generations would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed below.

7.2.1 LAND USE CHANGES THAT COMMIT FUTURE GENERATIONS

The Project involves the redevelopment of a previously developed site. As described in Chapter 3, Project Description, of this Draft EIR, the Project site is currently occupied by approximately 1,950 parking spaces, a 462-slip boat harbor, a 9-hole golf course, and a Shoreline Recreational area which includes a 131-room Marina Inn, Horatio's Restaurant, and an El Torito restaurant. Additionally, the foundation and deck piers of the former Blue Dolphin Restaurant remain on-site. The Project would redevelop the site by adding public amenities, a new 200-room hotel with an approximately 15,000 square-foot conference center, an approximately 150,000 square-foot office campus, approximately 354 residential housing units, and three new restaurants totaling approximately 21,000 square-feet. Although the Project would include new construction of residential homes and a new hotel, the Project site is already developed and located in an urban area that includes residential, office, and commercial land uses; therefore, the Project is not expected to result in any land use changes that would commit future generations that are not already prevalent in the Project site vicinity. Additionally, as stated in Chapter 1, Executive Summary, the direction from the San Leandro City Council to staff is to maintain the existing San Leandro Marina for as long as financially feasible; however, it is being assumed that the harbor masters office, fuel pump/dock, and the 462 existing boat slips in the harbor basin would eventually be removed by the City.

7.2.2 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. Demolition and construction activities associated with development of the Project would involve some risk for environmental accidents. However, these activities would be monitored by the City of San Leandro, State, and federal agencies, and would follow the professional industry standards for safety and construction. The land uses proposed by the Project would not include any uses or activities that are likely to contribute to or be the cause of significant environmental accident. As a result, the Project would not pose a substantial risk of environmental accidents.

7.2.3 LARGE COMMITMENT OF NONRENEWABLE RESOURCES

Consumption of nonrenewable resources includes issues related to increased energy consumption, conservation of agricultural lands, and lost access to mining reserves. The Project would require water, electric, and gas service, and resources for construction. The ongoing operation of the Project would involve the use of nonrenewable resources. Construction and ongoing maintenance of the Project would

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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 and 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 Project (post-construction), energy sources including oil and gasoline would be used for lighting, heating, and cooling of businesses, and transportation of people to and from the Project site.

The Project, however, would include several features that would offset or reduce the need for nonrenewable resources. The Project would be required to comply with all applicable building and design requirements, including those set forth by Title 24 relating to energy conservation. In compliance with CALGreen, the State's Green Building Standards Code, the Project would be required to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials.

The Project site does not contain any agricultural land or a mining reserve, so it would not affect those natural resources.

7.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

Section 15126.2(d) of the California Environmental Quality Act (CEQA) Guidelines 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 be the extension of urban services or transportation infrastructure to a previously un-served or under-served area, or the removal of major barriers to development. This section evaluates the 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 Project growth would cause adverse environmental impacts.

Although the Project would include new construction of approximately 354 residential units, and new commercial and office space, which could directly induce growth resulting from additional employment opportunities and new residents, as described in Chapter 4.11, Population and Housing, the Project is expected to increase population by approximately 970 new residents, or a 1.2 percent increase from 2010 population. As such, the small increase is not considered a substantial direct growth, since the projected growth would be well below the projected population increase reported by the Association of Bay Area Governments.

The Project is not expected to result in indirect growth inducement because all development associated with the Project would occur on the Project site. The Project is located on a previously developed site in the San Leandro Shoreline Area of the City of San Leandro. Also, the Project is assumed to rely on mostly existing infrastructure with modifications needed when necessary.

Development of the Project would involve the demolition and construction activities that could generate some temporary employment opportunities; however, it is unlikely that construction workers would

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relocate to the City of San Leandro as a result of the Project. Thus, the Project would not be considered growth inducing from an employment perspective.

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This report was prepared by the following consultants and individuals:

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ORGANIZATIONS AND PERSONS CONSULTED

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