

ENCINAL TERMINALS MASTER PLAN

Draft Focused Supplemental
Environmental Impact Report

State Clearinghouse Number: 2016042076

Prepared for
City of Alameda

February 2017



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CHAPTER 1

Introduction

This Draft Supplemental Focused Environmental Impact Report (SFEIR) has been prepared for the proposed Encinal Terminals Master Plan project (project or proposed project). This section describes: 1) the purpose and legal authority of the SFEIR; 2) the scope and content of the SFEIR; 3) lead, responsible, and trustee agencies; and 4) the environmental review process required under the California Environmental Quality Act (CEQA).

A. Project Overview

The project sponsor, North Waterfront Cove LLC, is proposing a Master Plan and Density Bonus Application for Encinal Terminals, a new residential mixed use waterfront community on both land and water. Overall, the proposed project would demolish existing warehouse and industrial structures on the project site and allow for development of up to 589 new housing units, a marina with up to 160 boat slips and a harbormaster's office, between 30,000 and 50,000 square feet of commercial/office and restaurant uses, and over three acres of waterfront-related public open space and parks. Three existing wooden wharves and two concrete wharves on the site would be rehabilitated and/or replaced as part of development of the proposed waterfront open space uses, through a combination of demolition, rehabilitation, modification, and/or retrofit activities. The residential unit types proposed include condominiums, townhomes, lofts, stacked flats, live-work units, and high-rise view residences. Other proposed improvements include establishing locations for launching kayaks and other small watercraft, provisions for future public water taxi/water shuttle or ferry terminal facilities, a new internal roadway system and utility infrastructure, and parking throughout the site. Characteristics of the proposed project are detailed further in Chapter 3 of this document.

Subsequent approvals from the City that would be necessary for the proposed mixed use project include: a tidelands exchange with the State of California, subdivision map(s); conditional use permits, as deemed necessary for subsequent individual development projects; as well as Development Plan and Design Review of individual buildings, among other approvals. For more discussion on the project approvals, please see Chapter 3, *Project Description*.

B. California Environmental Quality Act

Consistent with CEQA, this SFEIR is an informational document for use by governmental agencies and the public to identify and evaluate potential environmental consequences of the proposed project and to recommend mitigation measures and/or alternatives to the project to minimize the project's significant adverse impacts (CEQA Guidelines Section 15121(a)).

Environmental Review Context

The Encinal Terminals project area was included as part of a Program Environmental Impact Report for the Northern Waterfront General Plan Amendment (GPA EIR), which the City of Alameda certified in 2007 (SCH No. 2002102118). As provided in Section 15162 of the CEQA Guidelines, a Lead Agency may prepare a Supplemental EIR, a Subsequent EIR, or a Mitigated Negative Declaration (MND) when a previous EIR has been certified by the Lead Agency, and substantial changes are proposed to the project that would require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

Table 1-1 outlines the proposed changes to the proposed Encinal Terminals project since the GPA EIR was certified in 2007. The table shows the changes to both the project description and the identified changes in the project area since the original EIR was certified.

**TABLE 1-1
SUBSTANTIAL CHANGES TO PROJECT OR ENVIRONMENT**

CEQA Guidelines	Proposed Project Compared to the GPA EIR
Substantial Changes to the Project (Sec.15162(a)(1))	
	<i>Residential Use:</i> Modify GPA EIR assumption of 165 residential units to up to 589 residential units.
	<i>Commercial Use:</i> Modify GPA EIR assumption of 200,000 sq. ft. of commercial use to between 30,000 and 50,000 sq. ft. of commercial use.
	<i>Development Program and Site Area:</i> Modify GPA EIR assumption to include the development of a marina with up to 160 berths.
Substantial Changes to Circumstances (Sec.15162(a)(2)) and/or New Information of Substantial Importance (Sec.15162(a)(3))^a – Since the GPA EIR	
	Transportation and Circulation: Updates to environmental setting, traffic model, and thresholds of significance since the GPA EIR.
	Land Use: With the adoption of the City's recent Housing Element, the City zoned the property to Mixed Use (M-X) with a Multi-Family Overlay (MF), which allows for a wide variety of residential, retail, marine and commercial uses.
	Biological Resources: The Townsend's big-eared bat was identified in June 2013 by the California Fish and Wildlife Commission as a candidate for protection as an endangered species under the state's Endangered Species Act.

^a Air quality and global climate change are not considered "changed circumstances" or "new information" since information regarding these topics was known, or could have been known, in 2007.

SOURCE: CEQA Guidelines Section 15162; ESA

Section 15163 of the CEQA Guidelines states that a lead agency may choose to prepare a "supplement" to an EIR rather than a "subsequent" EIR if:

1. Any of the conditions described in Section 15162 would require the preparation of a subsequent EIR; and
2. Only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.

Further, CEQA Guidelines Section 15163 states:

- The supplement to the EIR need contain only the information necessary to make the previous EIR adequate for the project as revised.
- A supplement to an EIR shall be given the same kind of notice and public review as is given to a draft EIR under Section 15087.
- A supplement to an EIR may be circulated by itself without recirculating the previous draft or final EIR.
- When the agency decides whether to approve the project, the decision-making body shall consider the previous EIR as revised by the supplemental EIR. A finding under Section 15091 shall be made for each significant effect shown in the previous EIR as revised.

A supplemental EIR augments the EIR prepared for a prior project to address any project changes or changed circumstances since the time the prior document was certified. In the case of changes to a previously approved project, as is the case here, the purpose of a supplemental EIR is to provide additional analysis that ensures the previous EIR adequately addresses the potential impacts of the modified project. Accordingly, the supplemental EIR need contain only the analysis necessary to respond to the proposed changes in the project that triggered the need for additional environmental review (CEQA Guidelines Section 15163).

CEQA Guidelines Section 15063(c)(3)(A) states that an Initial Study prepared for a proposed project can be utilized to focus an EIR on the effects determined to be potentially significant. In the case of this project, an Initial Study was prepared and circulated for public review. The Initial Study circulation period began on April 27, 2016 and ended on May 30, 2016 (SCH No. 2016042076). The Initial Study and the associated Notice of Preparation (NOP) are attached to this SFEIR as **Appendix A**. The Initial Study determined that the effects of the project for a number of issues would either have no impact or a less-than-significant impact. For some issues, it was determined that a potentially significant impact was possible.

Based on the changes to the project and the changes that have occurred in the project area, together with the analysis contained in the GPA EIR and project-specific Initial Study contained in **Appendix A**, the City has determined that a Supplemental Focused EIR (SFEIR) should be prepared for the project, focusing only on those issues where it was determined in the Initial Study that the project could have a potentially significant effect on the environment. Existing mitigation measures from the 2007 EIR that are still relevant are retained in this Draft SFEIR.

Environmental Effects Analyzed in this SFEIR

As noted above, an Initial Study was prepared for the project and circulated with an NOP that analyzed the changes to the project and determined which environmental topic areas warranted further environmental review. The City determined in the Initial Study that the project may result in new and/or substantially more severe effects related to several topic areas, compared to the impacts identified in the GPA EIR. This SFEIR presents detailed analysis of these topics areas, which include: changes to the aesthetic environment; impacts on air quality resulting from construction and operation activities that would take place within the plan area; potential effects

on biological resources; noise impacts from construction and operation activities; impacts associated with population and housing in the City; impacts to public services and recreation; impacts related to traffic to and from the project site; and impacts to utilities and service systems.

Environmental topics that were analyzed in the Initial Study and were determined to result in similar or reduced impacts from those identified in the Northern Waterfront GPA EIR include: agriculture and forestry resources; cultural resources; geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; and mineral resources.

Purpose and Function of this SFEIR

The purpose of this SFEIR is to provide the City, public agencies, and the public in general with detailed information about the environmental effects of construction and operation activities that would take place with implementation of the project, to examine and institute methods of mitigating any adverse environmental impacts should the project be approved, and to consider alternatives to the project as proposed. The lead agency, the City of Alameda, is the public agency that has the principal responsibility for approving the project. CEQA provides that public agencies should not approve a project until all feasible means available have been employed to avoid or substantially lessen the significant environmental effects of the project. “Feasible” means capable of being accomplished in a successful manner within a reasonable period of time taking into account economic, environmental, legal, social, and technological factors (CEQA Guidelines Section 15364). The City will use the SFEIR, along with other information and public processes, to determine whether to approve, modify, or disapprove the proposed project, and to specify any applicable environmental or other conditions of approval as may be required for implementation of the project.

The purpose of the analyses contained in this Draft SFEIR is not to assess whether the provisions of the project are desirable but rather to measure the environmental impacts that would result from construction and operation activities within the project site. Future development proposals for areas within the project site (should it be adopted) would be required to adhere to all applicable regulations and to implement the mitigation measures identified in this SFEIR, as well as applicable provisions of the City’s General Plan, Municipal Code, and all other applicable regulations.

C. Lead, Responsible, and Trustee Agencies

The CEQA Guidelines require the identification of “lead,” “responsible,” and “trustee” agencies. The City of Alameda is the lead agency for the proposed project because it has the principal responsibility for approving the project.

A “responsible agency” is a public agency other than the lead agency that has discretionary approval authority over a project (the CEQA Guidelines define a public agency as a state or local agency, but specifically exclude federal agencies from the definition). The agencies whose approvals are required are identified in Chapter 3, *Project Description*, of this SFEIR. A “trustee agency” refers to a state agency having jurisdiction by law over natural resources affected by a project.

D. Project Scoping, Draft SFEIR, and Final SFEIR

Project Scoping

On April 27, 2016, the City sent an NOP to responsible, trustee, and federal agencies, as well as to organizations, and individuals potentially interested in the project. The NOP is included as **Appendix A** of this SFEIR, along with the project's Initial Study. The NOP requested that agencies with regulatory authority over any aspect of the project describe that authority and identify the relevant environmental issues that should be addressed in the EIR. Interested members of the public were also invited to comment. A public hearing on the proposed project was held during the Initial Study circulation period on May 23, 2016. All comments received during the NOP comment period are attached as **Appendix B**.

Draft SFEIR

This document constitutes the Draft SFEIR. The Draft SFEIR contains a description of the project, description of the environmental setting, identification of significant environmental impacts and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives. Upon completion of the Draft SFEIR, the City filed a Notice of Completion (NOC) with the Governor's Office of Planning and Research to begin the public review period (CEQA Section 21161).

This Draft SFEIR is available for public review for the period identified on the notice inside the front cover of the document, during which time written comments on the Draft SFEIR may be submitted to the City of Alameda at the address provided below. Responses to all comments received on environmental issues regarding the Draft EIR and submitted within the specified review period will be prepared and included in the Final SFEIR.

Public Notice and Public Review

Concurrent with the NOC, the City has provided public notice of the availability (NOA) of the Draft SFEIR for public review, and is inviting comment from the general public, agencies, organizations, and other interested parties. The public review period will be forty-five (45) days beginning February 8, 2017. The comment period will close on March 24, 2017.

All comments or questions regarding the Draft SFEIR should be addressed to:

Andrew Thomas, AICP
Assistant Community Development Director
Planning and Building Department
2263 Santa Clara Avenue, Room 190
Alameda, CA 94501

or via e-mail to:

athomas@alamedaca.gov

Final SFEIR and Certification

Following the public review period, a Final SFEIR will be prepared. The Final SFEIR will respond to comments on environmental issues that are received during the public review period, including both written comments and oral comments made at the public hearing on the Draft SFEIR.

Certification of the SFEIR and Project Consideration

The City will review and consider the Final SFEIR. If the City finds that the Final SFEIR is adequate and complete, the City will certify the Final SFEIR. Upon review and consideration of the Final SFEIR, the Alameda City Council may take action to approve, conditionally approve, revise, or reject the proposed project. A decision to approve the project would be accompanied by written findings in accordance with CEQA Guidelines Section 15091, and a Statement of Overriding Considerations with respect to significant and unavoidable impacts in accordance with CEQA Guidelines Section 15093, as applicable (See Public Resources Code Section 21081).

Mitigation Monitoring and Reporting Program

Throughout the SFEIR, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a monitoring and reporting program. CEQA Section 21081.6(a) requires lead agencies to adopt a mitigation monitoring and reporting program to list the measures that have been adopted and incorporated into the project or adopted and or made a condition of project approval in order to mitigate or avoid the project's significant effects on the environment. The Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during project implementation. The Mitigation Monitoring and Reporting Program will be presented to the City Council for adoption at the time of project approval.

E. Issues of Concern

Pursuant to Section 15123(b)(2) of the CEQA Guidelines, a Draft EIR shall identify points of controversy known to the lead agency or issues of concern raised by local agencies or the public. Public comment during the NOP period included community concerns related to the project's potential to increase citywide vehicle miles traveled (VMT), effects of construction in the Bay tidal zone, the visual effects of the project on nearby Bay Trail facilities, effects of future sea level rise on the project, soil or groundwater contamination near offsite utility improvement areas, the capacity of East Bay Municipal Utility District's (EBMUD) wastewater conveyance and treatment facilities, and water conservation.

F. Range of Alternatives

CEQA requires that an EIR discuss a reasonable range of alternatives to the proposed project. This EIR describes and analyzes a reasonable range of alternatives, including a "No Project" alternative as required under CEQA (CEQA Guidelines Section 15126.6[e]); compares the environmental effects of each alternative with the effects of the proposed project; and addresses

the relationship of each alternative to the project objectives. The determinations of the Lead Agency concerning the feasibility, acceptance, or rejection of the alternatives considered in this SFEIR will be addressed in the findings when the City of Alameda considers approval of the project, as required by CEQA.

G. Organization of the Draft EIR

This *Introduction* (Chapter 1) presents an overview of the process by which this SFEIR will be reviewed and used by the decision-makers in their consideration of the proposed project.

The *Summary* (Chapter 2) includes a brief project description and a summary table that lists the environmental impacts, proposed mitigation measures, and the level of significance after mitigation. Detailed analysis of these impacts and mitigation measures is provided in Chapter 4 (Environmental Setting, Impacts and Mitigation Measures). Chapter 2 also provides a summary of the alternatives to the proposed project.

The *Project Description* (Chapter 3) describes the project location and boundaries; lists the project objectives; and provides a general description of the technical, economic, and environmental characteristics of the proposed project. This chapter also includes a list of the City's required approvals and other agencies that may be responsible for approving aspects of the project.

The *Environmental Setting, Impacts and Mitigation Measures* (Chapter 4) contains a description of the environmental setting (existing physical environmental conditions), the regulatory framework, and the environmental impacts (including cumulative impacts) that could result from the proposed project. It includes the thresholds of significance used to determine the significance of adverse environmental effects. This chapter also identifies the mitigation measures that would avoid or substantially lessen these significant adverse impacts. The impact discussions disclose the significance of each impact both with and without implementation of mitigation measures.

Alternatives (Chapter 5) evaluates a range of reasonable alternatives to the proposed project and identifies an environmentally superior alternative, consistent with the requirements of CEQA. The alternatives analysis evaluates each alternative's ability to meet the project objectives and its ability to reduce environmental impacts.

Other Statutory Sections (Chapter 6) presents growth-inducing effects, significant irreversible changes, and a summary of cumulative impacts, significant and unavoidable environmental impacts, and effects found to be less than significant.

Report Preparation (Chapter 7) identifies the authors of the EIR. Persons and documents consulted during preparation of the EIR are listed at the end of each analysis section (Sections 4.A through 4.H).

Appendices. The NOP/Initial Study, comment letters received on the NOP, and supporting documents and technical information for the impact analyses.

References

California Environmental Quality Act (CEQA) Statutes and Guidelines; Public Resources Code Section 21000 et seq.) and California Code of Regulations, Title 14, Sections 15000-et seq. 2010.

CHAPTER 2

Executive Summary

A. Project Under Review

The project sponsor, North Waterfront Cove LLC, is proposing a Master Plan and Density Bonus Application for Encinal Terminals, a new residential mixed use waterfront community on both land and water. Overall, the proposed project would demolish existing structures on the project site and construct up to 589 new housing units, a marina with up to 160 boat slips and a harbormaster's office, between 30,000 and 50,000 square feet of commercial/office and restaurant uses, and over three acres of waterfront-related public open space and parks. Three existing wooden wharves and two concrete wharves on the site would be improved as part of development of the proposed waterfront open space uses, through a combination of demolition, rehabilitation, modification, and/or retrofit activities. The residential unit types proposed include condominiums, townhomes, lofts, stacked flats, live-work units, and high-rise view residences. Other proposed improvements include establishing locations for launching kayaks and other small watercraft launches, provisions for future public water taxi/water shuttle or ferry terminal facilities, a new internal roadway system and utility infrastructure, and parking throughout the site. Characteristics of the proposed project are detailed further in this section.

The project could include construction of the following components:

- Approximately three acres of waterfront-related public open space and parks, including public access around the entire perimeter of the property.
- A new marina with up to 160 private berths and a harbormaster's office with facilities for boat sales and rentals including small crafts such as kayaks, row boats and board sailing equipment.
- A mixed-density residential neighborhood, with up to 589 residential dwelling units in a variety of configurations, including townhomes, stacked flats, live/work, lofts, and high-rise view residences.
- Between 30,000 and 50,000 square feet of retail, restaurant, and office uses along Clement Avenue and along the waterfront.
- A new internal grid of public streets and public infrastructure.
- Accessible public waterfront parking strategically located at various points to allow access to the waterfront perimeter.
- Locations for direct public access to the water, including kayak/small craft launches, waterfront steps and ramps.

- Provisions for future public water shuttle, water taxi or ferry terminal facilities.
- Development of a segment of Clement Avenue fronting the property.
- Rehabilitation of wharf surfaces or supporting pilings.

Regional and Local Setting

The project is located at 1521 Buena Vista Avenue in the north-central portion of the City of Alameda. The City of Alameda occupies approximately 12.4 square miles of land area immediately south of the City of Oakland and the Oakland-Alameda Estuary (the “Estuary”), east of San Francisco, and north and east of the San Francisco Bay (the “Bay”). Alameda Island makes up approximately 80 percent of the City’s land area, with the remainder on Bay Farm Island across the San Leandro Channel.

The project site encompasses 32 acres of land and water. Water surrounds the property on three sides with Alaska Basin (called Encinal Basin on some maps) to the west, the Oakland Estuary to the north, and the Fortman Marina to the east. The net usable land area is approximately 22 acres and includes four parcels, one of which (approximately six acres) is leased to North Waterfront Cove LLC (NWC) by the City of Alameda under a long-term ground lease. The leased parcel consists of State tidelands that are held in trust by the City of Alameda. The other ten acres are submerged lands, which are part of the project site due to its proximity to the adjacent estuary.

B. Project Objectives

CEQA *Guidelines* Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project.

“A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.”

The project objectives are:

- Repurpose the site with a mix of residential, commercial, and water-related uses that will create and support a lively waterfront and a pedestrian-friendly environment.
- Provide water and maritime-related job and business opportunities consistent with the site’s waterfront location and maritime history.
- Create a continuous public waterfront promenade and sequence of public waterfront open spaces that provide opportunities for walking, biking, kayaking, and other waterfront activities.
- Reduce truck traffic in the adjacent neighborhoods by replacing warehouse and trucking uses with employment and residential uses.
- Provide a mix of uses and activities that will support a variety of lifestyles and employment opportunities.

- Assure a significant portion of new residential development is affordable to households at all income levels.
- Establish linkages to the surrounding city and neighborhoods for all modes of travel.
- Provide clear, safe access and linkages for pedestrians and bicyclists, where none have existed in the past.
- Strengthen references to the historic background of the site and environs through design.

C. Environmental Impacts and Mitigation Measures

Potentially significant environmental impacts of the proposed project are summarized in **Table 2-1**. This table lists impacts and mitigation measures in three major categories: significant impacts that would remain significant even with mitigation (significant and unavoidable); significant impacts that could be mitigated to a less than significant level (significant but mitigable); and impacts that would not be significant (less than significant). For each significant impact, the table includes a summary of feasible mitigation measure(s) and an indication of the level of significance of the impact following implementation of mitigation measures. A complete discussion of each impact and associated mitigation measure is provided in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*.

D. Alternatives

Alternatives to the proposed project are addressed in detail in Chapter 5 of the EIR and are described below.

Alternative 1 – The No Project Alternative

This alternative considers the environmental impacts of continuing the existing uses on the site, which include leasing all or a portion of the existing site for industrial and manufacturing use. The site is currently zoned Mixed Use Planned Development District (MX), which is intended to encourage the development of a compatible mixture of land uses which may include residential, retail, offices, recreational, entertainment, research oriented light industrial, water oriented or other related uses. Like the proposed project, future development of the site would require the adoption of a master plan by action of the City Council, upon completion of environmental review to disclose the potential environmental impacts of the project. As such, the no project alternative assumes that no new residential, commercial, recreation, or maritime uses would be developed at the site.

Alternative 2 – No Public Trust Land Exchange Alternative

Under this alternative, the project site would be developed with 589 residential units on the land within the site that is currently not encumbered by the Tidelands restrictions. The six-acre parcel in the center of the site that is subject to the State of California's Public Trust for commerce, navigation and fisheries would remain and be leased to Tidelands compatible uses. As required by law, development of the existing tidelands area would be restricted to those uses that further

the purposes of the Trust, including maritime-related uses, water-oriented recreation, visitor-serving facilities, habitat preservation, and scientific study. Residential and general commercial uses would not be developed within the tidelands area; rather, these uses would be developed on the remainder of the site.

Alternative 3 – The Northern Waterfront General Plan Amendment Development Alternative

Under this alternative, the project site would be developed with a the mix of uses envisioned in the 2008 Northern Waterfront General Plan Amendment (GPA) EIR. In this alternative, the property would be developed with 165 new single family and duplex homes and approximately 200,000 square feet of commercial space. Like the proposed project, this alternative would include the marina with up to 160 boat slips the waterfront improvements. This alternative does include the Tidelands exchange anticipated in the project proposal. This alternative also represents a lower density residential alternative to the project proposal.

E. Areas of Controversy

CEQA Guidelines Section 15123 specifies that the EIR summary shall identify “areas of controversy” known to the Lead Agency including issues raised by agencies and the public, and issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects. The following issues are known to the Lead Agency to be controversial or that have the potential to be controversial: built environment; increased air quality impacts; impacts to biological resources; land use; increased traffic; increased noise; hazardous materials; and historic context of the site.

The potential impacts associated with all of these areas of controversy are addressed in Chapter 4 of the Draft SFEIR.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
A. Air Quality and Climate Change			
<p>Impact 4.A-1: The proposed project would not result in localized construction dust-related air quality impacts; generate construction emissions that would result in a substantial increase of criteria pollutants and precursors for which the air basin is in nonattainment under an applicable federal or state ambient air quality standard; or expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM2.5). (Less than Significant with Mitigation)</p>	<p>GPA EIR Mitigation Measure AIR-1a (revised): Implementation of Dust Abatement Programs. Proponents of development projects within the Northern Waterfront GPA area shall be required to demonstrate compliance with all applicable City regulations and operating procedures prior to issuance of building or grading permits, including standard dust control measures. The effective implementation of dust abatement programs, incorporating all of the following dust control measures, would reduce the temporary air quality impact associated with construction dust.</p> <ul style="list-style-type: none"> All active construction areas shall be watered <u>two times daily</u> using equipment and staff provided by the project applicant or prime contractor, as needed, to avoid visible dust plumes. Appropriate non-toxic dust palliative or suppressant, added to water before application, may be used. All trucks hauling soil, sand and other loose materials shall be covered or shall maintain at least two feet of freeboard. All unpaved access roads, parking areas and construction staging areas shall be either paved, watered as necessary to avoid visible dust plumes, or subject to the application of (non-toxic) soil stabilizers. All paved access roads, parking areas and staging areas at the construction site shall be swept daily with water sweepers. <u>The use of dry power sweeping is prohibited.</u> If visible soil material is carried onto adjacent public streets, these streets shall be swept daily with water sweepers. <u>The use of dry power sweeping is prohibited.</u> All stockpiles of debris, soil, sand or other materials that can be blown by the wind shall either be covered or watered as necessary to avoid visible dust plumes. An off-pavement speed limit of 15 miles per hour for all construction vehicles shall be incorporated into the construction contract and enforced by the prime contractor. All inactive portions of the project site (those areas which have been previously graded, but inactive for a period of ten days or more) shall be watered with an appropriate dust suppressant, covered or seeded. All earth-moving or other dust-producing activities shall be suspended when the above dust control measures prove ineffective in avoiding visible dust plumes during periods of high winds. The wind speed at which this suspension of 	Less than Significant	No new or more severe impact

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
A. Air Quality and Climate Change (cont.)			
Impact 4.A-1 (cont.)	<p>activity will be required may vary, depending on the moisture conditions at the project site, but suspension of such activities shall be required in any case when the wind speed exceeds 25 miles per hour.</p> <ul style="list-style-type: none"> All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. <u>Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.</u> Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). <u>Clear signage shall be provided for construction workers at all access points.</u> All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. <u>All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</u> Post a publicly visible sign with the telephone number and person to contact at the City of Alameda regarding dust complaints. <u>This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.</u> 		
Impact 4.A-2: The proposed project would not generate operational emissions that would result in a considerable net increase of criteria pollutants or precursors for which the air basin is in nonattainment under an applicable federal or state ambient air quality standard or expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM2.5). (Less than Significant)	Mitigation Measure 4.A-2: All wood-burning devices, such as woodstoves and open hearth fire places shall be prohibited in residential units associated with the proposed project. Only natural gas fireplaces shall be permitted.	Less than Significant	No new or more severe impact
Impact 4.A-3: The proposed project would not expose sensitive receptors to substantial pollutant concentrations (Less than Significant)	Mitigation Measure AIR-3: The project sponsors shall ensure that construction contract specifications include a requirement that all off-road diesel-powered construction equipment used for project improvements be equipped with a Level 3 Verified Diesel Emissions Control (VDEC), which would reduce diesel particulate emissions by at least 85 percent.	Less than Significant	No new or more severe impact
Impact 4.A-4: The proposed project would not create objectionable odors affecting a substantial number of people. (Less than Significant)	None required	Less than Significant	No new or more severe impact

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
A. Air Quality and Climate Change (cont.)			
Impact 4.A-5: The proposed project would not conflict with or obstruct the implementation of the applicable air quality plan. (Less than Significant)	<p>Mitigation Measure 4.A-4: The City shall require that the following measures be implemented, either by the City or subsequent development sponsors or in combination, to encourage the use of low- and zero-emission vehicles in travel to and from the project site:</p> <ul style="list-style-type: none"> Promote use of clean fuel-efficient vehicles through preferential parking and/or installation of charging stations. Promote zero-emission vehicles by providing a neighborhood electric vehicle program to reduce the need to have a car or second car vehicles as one potential element of a TDM program that would be required of all new developments. 	Less than Significant	No new or more severe impact
Impact 4.A-6: The proposed, when combined with past, present and other reasonably foreseeable development in the vicinity, would not result in cumulative air quality impacts (Less than Significant)	Implement Mitigation Measures 4.A-1 and 4.A-4 .	Less than Significant	No new or more severe impact
B. Biological Resources			
Impact 4.B-1: The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the United States Fish and Wildlife Service. (Less than Significant with Mitigation)	<p>Mitigation Measure 4.B-1a: Prior to the start of pier rehabilitation and marina and ferry terminal facilities construction, the City shall require a NMFS-approved sound attenuation monitoring plan to protect fish and marine mammals, if pile driving is required for project implementation. This plan shall provide detail on the sound attenuation system, detail methods used to monitor and verify sound levels during pile driving activities, and describe management practices to be taken to reduce impact hammer pile-driving sound in the marine environment to an intensity level of less than 183 dB. The sound monitoring results shall be made available to the NMFS. The plan shall incorporate, but not be limited to, the following best management practices (BMPs):</p> <ul style="list-style-type: none"> To the extent feasible, all pilings shall be installed and removed with vibratory pile drivers only. Vibratory pile driving will be conducted following the Corps' "Proposed Procedures for Permitting Projects that will Not Adversely Affect Selected Listed Species in California". USFWS and NOAA completed Section 7 consultation on this document, which establishes general procedures for minimizing impacts to natural resources <u>associated</u> with projects in or adjacent to jurisdictional waters An impact pile driver may only be used where necessary to complete installation of larger steel pilings in accordance with seismic safety or other engineering criteria 	Less than Significant.	No new or more severe impact.

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
B. Biological Resources (cont.)			
Impact 4.B-1 (cont.)	<ul style="list-style-type: none"> The hammer shall be cushioned using a 12-inch thick wood cushion block during all impact hammer pile driving operations All piling installation using impact hammers shall be conducted between June 1 and November 30, when the likelihood of sensitive fish species being present in the work area is minimal If pile installation using impact hammers must occur at times other than the approved work window, the project applicant shall obtain incidental take authorization from NMFS and CDFW, as necessary, to address potential impacts on steelhead trout, chinook salmon, and Pacific herring and implement all requested actions to avoid impacts The project applicant shall monitor and verify sound levels during pile driving activities. The sound monitoring results will be made available to NMFS and the City In the event that exceedance of noise thresholds established and approved by NMFS occurs, a contingency plan involving the use of bubble curtains or air barrier shall be implemented to attenuate sound levels to below thresholds <p>Mitigation Measure 4.B-1b: During the project permitting phase, the City will ensure that any projects requiring in-water work include consultation with NMFS to determine if the work can be covered under one of the programmatic consultations for federally listed species described above or if a project-level BO would be required and whether an Incidental Harassment Authorization for marine mammals would be needed for dredging or pile driving activities. The project applicant shall also consult with CDFW regarding State special-status fish and the potential need for an incidental take permit (ITP). The project applicant shall submit to the City copies of any IHA and/or ITP received or, alternatively, copies of correspondence confirming that an IHA and/or ITP is not required for the project in question.</p> <p>Mitigation Measure 4.B-1c: As part of the NMFS-approved sound attenuation monitoring plan required for pile driving in Mitigation Measure 4-2a, the City shall ensure that the project applicant implements these additional actions to reduce the effect of underwater noise transmission on marine mammals. These actions shall include at a minimum:</p> <ul style="list-style-type: none"> Establishment of a 1,600-foot (500-meter) safety zone that shall be maintained around the sound source, for the protection of marine mammals in the event that sound levels are unknown or cannot be adequately predicted 		

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
B. Biological Resources (cont.)			
Impact 4.B-1 (cont.)	<ul style="list-style-type: none"> Work activities shall be halted when a marine mammal enters the 1,600-foot (500-meter) safety zone and resume only after the animal has been gone from the area for a minimum of 15 minutes A "soft start" technique shall be employed in all pile driving to give marine mammals an opportunity to vacate the area Maintain sound levels below 90 dBA when pinnipeds (seals and sea lions) are present A NMFS-approved biological monitor will conduct daily surveys before and during impact hammer pile driving to inspect the work zone and adjacent Bay waters for marine mammals. The monitor will be present as specified by NMFS during the impact pile-driving phases of construction <p>Mitigation Measure 4.B-1d: Prior to occupancy, the City shall ensure that the project applicant installs dock lighting on all floating docks that minimizes artificial lighting of Bay waters by using shielded, low-mounted, and low light-intensity fixtures and bulbs.</p> <p>Mitigation Measure 4.B-1e: To the extent practicable, construction activities including building renovation, demolition, vegetation and tree removal, and new site construction shall be performed between September 1 and January 31 in order to avoid breeding and nesting season for birds. If these activities cannot be performed during this period, preconstruction survey for nesting birds shall be conducted by a qualified biologist.</p> <p>In coordination with the City, surveys shall be performed during breeding bird season (February 1 – August 31) no more than 14 days prior to construction activities listed above in order to locate any active passerine nests within 250 feet of the project site and any active raptor nests within 500 feet of the project site. Building renovation, tree and vegetation removal, and new construction activities performed between September 1 and January 31 avoid the general nesting period for birds and therefore would not require pre-construction surveys.</p> <p>If active nests are found on either the project site or within the 500-foot survey buffer surrounding the project site, no-work buffer zones shall be established around the nests in coordination with CDFW. No demolition, vegetation removal, or ground-disturbing activities shall occur within a buffer zone until young have fledged or the nest is otherwise abandoned as determined by the qualified biologist. If work during the nesting season stops for 14 days or more and then resumes, then nesting bird surveys shall be repeated, to ensure that no new birds have begun nesting in the area.</p>		

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
B. Biological Resources (cont.)			
Impact 4.B-1 (cont.)	<p>GPA EIR Mitigation Measure BIO-1 (revised): Proponents of each project in the Northern Waterfront GPA area shall engage a qualified biologist to prepare conduct a preconstruction survey of the project area in order to locate potential roosting bat habitat and active colonies of all buildings scheduled for demolition or renovation shall be conducted no more than two weeks in advance of initiation of building demolition or renovation activities onsite or initiation of construction within 100 feet of structures providing potential bat roosting sites. Potential direct and indirect disturbances to bats shall be identified by locating potential habitat and active colonies and instituting protective measures prior to construction. No activities that could disturb active roosts shall proceed prior to the completed surveys. 30 days prior to the initiation of demolition or renovation activities. Special attention shall be given to buildings where pallid bats were observed during the earlier survey or where measures to discourage roosting were implemented. If no bats or signs of an active roost are found, no additional measures are required. If a bat roost site is found, then measures shall be implemented to discourage roosting at the site. If a maternity colony of bats is found, the building and the bats shall not be disturbed until the young have dispersed, as determined by a qualified biologist.</p> <p><u>Should potential roosting habitat or active bat roosts be found in structures to be disturbed (i.e. demolished or renovated) under the project, the following measures shall be implemented:</u></p> <ul style="list-style-type: none"> • <u>Removal of structures shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 15 – August 31); and outside of months of winter torpor (approximately October 15 – February 28), to the extent feasible.</u> • <u>If removal of structures during the periods when bats are active is not feasible and active bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the project site where structure demolition or renovation is planned, a no-disturbance buffer of 100 feet shall be established around the roost sites until they are determined to be no longer active by a qualified biologist.</u> • <u>The qualified biologist shall be present during structure disturbance if active bat roosts are present. Structures with active roosts shall be removed only when no rain is occurring or is forecast to occur for three days and when daytime temperatures are at least 50 °F.</u> 		

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
B. Biological Resources (cont.)			
Impact 4.B-1 (cont.)	<ul style="list-style-type: none"> Removal of structures containing or suspected to contain active bat roosts shall be dismantled under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost. Bat roosts that begin during construction are presumed to be unaffected, and no buffer would be necessary. <p>If significant bat roosting habitat (e.g., maternity roosts or large non-maternity roost sites) is destroyed during structure removal, artificial bat roosts shall be constructed in an undisturbed area in the project site vicinity away from human activity and at least 200 feet from project demolition/construction activities. The design and location of the artificial bat roost(s) shall be determined by a qualified bat biologist.</p>		
Impact 4.B-2: Development facilitated by the proposed project would not have a substantial adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Less than Significant with Mitigation)	<p>Mitigation Measure 4.B-2a: Prior to in-water work related to pier retrofitting, the City shall ensure that the project applicant conducts a pre-construction survey to determine if native oysters, mussels, and eelgrass are present in Alaska Basin and the Oakland/Alameda Estuary to be affected by the project.</p> <ul style="list-style-type: none"> The eelgrass survey shall be conducted according to the methods contained in the California Draft Eelgrass Mitigation Policy (CDEMP) (NMFS 2011), with the exception that the survey shall be conducted within 120 days (rather than 60 days, as recommended in the CDEMP) prior to the desired construction start date, to allow sufficient time for modification of project plans (if feasible) and agency consultation. If found within or immediately adjacent to the construction footprint, the project applicant shall first determine whether avoidance of the beds is feasible. If feasible, impacts to the oyster or eelgrass bed shall be avoided. If complete avoidance is not feasible, the applicant shall request guidance from the National Marine Fisheries Service (or other applicable agency) as to the need and/or feasibility to move affected beds. Any translocation of eelgrass beds shall be conducted consistent with the methods described in the CDEMP and/or those described in Eelgrass Conservation in San Francisco Bay: Opportunities and Constraints (Boyer and Wyllie-Echeverria, 2010). Translocation of oyster beds shall be consistent with methods and recommendations presented in Shellfish Conservation and Restoration in San Francisco Bay: Opportunities and Constraints (Zabin et al., 2010) 	Less than Significant	No new or more severe impact

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
B. Biological Resources (cont.)			
Impact 4.B-2 (cont.)	<ul style="list-style-type: none"> If it is not possible to translocate oyster or eelgrass beds then the City shall ensure that the project applicant provides compensatory mitigation consistent with the CDEMP for eelgrass (a ratio of 3.01:1 [transplant area to impact area]) and a minimum 1:1 ratio for oyster beds. The relocation or compensatory mitigation site for eelgrass or oyster beds shall be within San Francisco Bay. <p>Mitigation Measure 4.B-2b: Prior to occupancy the City shall ensure that the marina project applicant prepares educational information regarding sensitive biological resources in the project vicinity and within Bay waters. This information shall be disseminated to all boaters using the marina and shall include, but not be limited to, information educating boat owner/operators about sensitive habitats and species in the Bay and actions they are required to implement to avoid impacts to marine resources.</p> <p>The educational information will be disseminated to visiting boaters through multiple methods including, but not limited to, brochures or pamphlets; marina and/or City websites; boating, cruising, and newspaper periodicals; and social media. The information shall be prepared soliciting input from, and in cooperation with, the National Marine Fisheries Service (NMFS), U.S. Coast Guard (USCG), California State Lands Commission, National Park Service (NPS), California Department of Parks and Recreation (CDPR), Bay Conservation and Development Commission (BCDC), and local organizations active in protecting Bay marine resources, as appropriate.</p> <p>Mitigation Measure 4.B-2c: The City shall require that the project applicant develop and implement a Marine Invasive Species Control Plan prior to commencement of any in-water work including, but not limited to, construction of piers and seawalls, dredging, pile driving, and construction of new stormwater outfalls. The plan shall be prepared in consultation with the United States Coast Guard (USCG), RWQCB, and other relevant state agencies. Provisions of the plan shall include but not be limited to the following:</p> <ul style="list-style-type: none"> Environmental training of construction personnel involved in in-water work Actions to be taken to prevent the release and spread of marine invasive species, especially algal species such as Undaria and Sargasso Procedures for the safe removal and disposal of any invasive taxa observed on the removed structures prior to disposal or reuse of pilings, docks, wave attenuators, and other features 		

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
B. Biological Resources (cont.)			
Impact 4.B-2 (cont.)	<ul style="list-style-type: none"> The onsite presence of qualified marine biologists to assist the contractor in the identification and proper handling of any invasive species on removed Port equipment or materials A post-construction report identifying which, if any, invasive species were discovered attached to equipment and materials following removal from the water, and describing the treatment/handling of identified invasive species. Reports shall be submitted to the City, as well as the USCG and the RWQCB if requested by the agencies. 		
Impact 4.B-3: Development facilitated by the proposed project would have a substantial adverse effect on federally protected wetlands, 'other waters', and navigable waters as defined by Sections 404 and 10 of the Clean Water Act and waters of the State through direct removal, filling, hydrological interruption, or other means. (Less than Significant with Mitigation)	<p>GPA EIR Mitigation Measure BIO-2: All dredging and in-water construction activities shall be consistent with the standards and procedures set forth in the Long Term Management Strategy for dredging in the San Francisco Bay waters, a program developed by the Bay Conservation and Development Commission (BCDC), the Regional Water Quality Control Board (RWQCB), the U.S. Environmental Protection Agency, (EPA), and other agencies, to guide the disposal of dredge materials in an environmentally sound manner.</p>	Less than Significant	No new or more severe impact
Impact 4.B-4: Development facilitated by the proposed project would not interfere with the movement of 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. (Less than Significant with Mitigation)	<p>Implement Mitigation Measures 4.B-1a, 4.B-1b, and 4.B-1c.</p> <p>Mitigation Measure 4.B-3: Prior to the issuance of the first building permit for each new building, or for any exterior renovation that would increase the surface area of glazing by 50 percent or more or that would replace 50 percent or more of existing glazing, the City shall require that the project applicant retain a qualified biologist experienced with bird strike issues to review and approve the design of the building to ensure that it sufficiently minimizes the potential for bird strikes. The City may also consult with resource agencies such as the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or others, as it determines to be appropriate during this review.</p> <p>The project applicant shall provide to the City a written description of the measures and features of the building design that are intended to address potential impacts on birds. The design shall include some of the following measures or measures that are equivalent to, but not necessarily identical to, those listed below, as new, more effective technology for addressing bird strikes may become available in the future:</p> <ul style="list-style-type: none"> Employ design techniques that create "visual noise" via cladding or other design features that make it easy for birds to identify buildings as such and not mistake buildings for open sky or trees; 	Less than Significant	No new or more severe impact

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
B. Biological Resources (cont.)			
Impact 4.B-4 (cont.)	<ul style="list-style-type: none"> Decrease continuity of reflective surfaces using “visual marker” design techniques, which techniques may include: <ul style="list-style-type: none"> Patterned or fritted glass, with patterns at most 28 centimeters apart, One-way films installed on glass, with any picture or pattern or arrangement that can be seen from the outside by birds but appear transparent from the inside, Geometric fenestration patterns that effectively divide a window into smaller panes of at most 28 centimeters, and/or Decals with patterned or abstract designs, with the maximum clear spaces at most 28 centimeters square. Up to 60 feet high on building facades facing the shoreline, decrease reflectivity of glass, using design techniques such as plastic or metal screens, light-colored blinds or curtains, frosting of glass, angling glass towards the ground, UV-A glass, or awnings and overhangs; Eliminate the use of clear glass on opposing or immediately adjacent faces of the building without intervening interior obstacles such that a bird could perceive its flight path through the glass to be unobstructed; Mute reflections in glass using strategies such as angled glass, shades, internal screens, and overhangs; and Place new vegetation sufficiently away from glazed building facades so that no reflection occurs. Alternatively, if planting of landscapes near a glazed building façade is desirable, situate trees and shrubs immediately adjacent to the exterior glass walls, at a distance of less than three feet from the glass. Such close proximity will obscure habitat reflections and will minimize fatal collisions by reducing birds’ flight momentum. <p>Lighting. The project applicant shall ensure that the design and specifications for buildings implement design elements to reduce lighting usage, change light direction, and contain light. These include, but are not limited to, the following general considerations that should be applied wherever feasible throughout the proposed project to reduce night lighting impacts on avian species:</p> <ul style="list-style-type: none"> Avoid installation of lighting in areas where not required for public safety 		

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
B. Biological Resources (cont.)			
Impact 4.B-4 (cont.)	<ul style="list-style-type: none"> Examine and adopt alternatives to bright, all-night, floor-wide lighting when interior lights would be visible from the exterior or exterior lights must be left on at night, including: <ul style="list-style-type: none"> – Installing motion-sensitive lighting – Installing task lighting – Installing programmable timers – Installing fixtures that use lower-wattage, sodium, and yellow-red spectrum lighting. Install strobe or flashing lights in place of continuously burning lights for any obstruction lighting. Where exterior lights are to be left on at night, install fully shielded lights to contain and direct light away from the sky. <p>Antennae, Monopole Structures, and Rooftop Elements. The City shall ensure, as a condition of approval for every building permit, that buildings minimize the number of and co-locate rooftop-antennas and other rooftop equipment, and that monopole structures or antennas on buildings, in open areas, and at sports and playing fields and facilities do not include guy wires.</p> <p>Educating Residents and Occupants. The City shall ensure, as a condition of approval for every building permit, that the project applicant agrees to provide educational materials to building tenants, occupants, and residents encouraging them to minimize light transmission from windows, especially during peak spring and fall migratory periods, by turning off unnecessary lighting and/or closing window coverings at night. The City shall review and approve the educational materials prior to building occupancy.</p> <p>Documentation. The project applicant and/or City shall document undertaking the activities described in this mitigation measure and maintain records that include, among others, the written descriptions provided by the building developer of the measures and features of the design for each building that are intended to address potential impacts on birds, and the recommendations and memoranda prepared by the qualified biologist experienced with bird strikes who reviews and approves the design of any proposed projects to ensure that they sufficiently minimize the potential for bird strikes.</p>		

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
B. Biological Resources (cont.)			
Impact 4.B-5: Development facilitated by the proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant with Mitigation)	Implement GPA EIR Mitigation Measure BIO-1 and NEW Mitigation Measures 4.B-1a through 4.B-1e, NEW Mitigation Measures 4.B-2a through 4.B-2c, GPA EIR Mitigation Measure BIO-2, and NEW Mitigation Measure 4.B-3.	Less than Significant	No new or more severe impact
Impact 4.B-6: Development facilitated by the proposed project would conflict with an adopted local, regional, or State Habitat Conservation Plan. (Less than Significant with Mitigation)	Implement GPA EIR Mitigation Measures BIO-1 and BIO-2, NEW Mitigation Measures 4.B-1a through 4.B-1e, 4.B-2a through 4.B-2c, and 4.B-3.	Less than Significant	No new or more severe impact
Impact 4.B-7: The proposed project, in conjunction with other past, current, or foreseeable development in Alameda, could result in cumulative impacts on biological resources. (Less than Significant with Mitigation)	Implement GPA EIR Mitigation Measure BIO-1, GPA EIR Mitigation Measure BIO-2, NEW Mitigation Measures 4.B-1a through 4.B-1e, NEW Mitigation Measures 4.B-2a through 4.B-2c, and NEW Mitigation Measure 4.B-3.	Less than Significant	No new or more severe impact
C. Land Use			
Impact 4.C-1: The proposed project would not physically divide an established community. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.C-2: The proposed project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the General Plan and zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.C-3: The proposed project would not conflict with an applicable Habitat Conservation Plans or Natural Community Conservation Plans. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.C-4: The proposed project, combined with cumulative development in the defined geographic area, including past, present, reasonably foreseeable future development, would not have significant adverse cumulative land use impacts. (Less than Significant)	None Required	Less than Significant	No new or more severe impact

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
D. Noise			
Impact 4.D-1: Construction of proposed project elements could expose persons to or generate noise levels in excess of the City noise standards or result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant with Mitigation)	<p>GPA EIR Mitigation Measure NOISE-1a (revised): Developers and/or contractors The applicant shall create and implement development-specific noise and vibration reduction plans, which shall be enforced via contract specifications. Contractors may elect any combination of legal, non-polluting methods to maintain or reduce noise and vibration to threshold levels or lower, as long as those methods do not result in other significant environmental impacts or create a substantial public nuisance. In addition, the applicant shall require contractors to limit construction activities to daytime hours between 7:00 am and 7:00 pm Monday through Friday and 8:00 am to 5:00 pm on Saturdays. The plan for attenuating construction-related noises shall be implemented prior to the initiation of any work that triggers the need for such a plan.</p> <p>GPA EIR Mitigation Measure NOISE-1b (revised): To reduce pile driving noise, "vibratory" pile driving or drilled and cast-in-place piles should be used wherever feasible. The vibratory pile driving technique, despite its name, does not generate vibration levels higher than the standard pile driving technique. It does, however, generate lower, less-intrusive noise levels.</p>	Less than Significant	No new or more severe impact
Impact 4.D-2: Construction facilitated by the proposed project could potentially result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (Less than Significant)	None required	Less than Significant	No new or more severe impact
Impact 4.D-3: Transportation-related operations facilitated by the proposed project could result in a substantial permanent increase in ambient noise levels in the vicinity or above levels existing without the project. (Less than Significant with Mitigation)	<p>GPA EIR Mitigation Measure NOISE-2a (revised): Acoustical studies, describing how the exterior and interior noise standards will be met, shall be required for all new residential or noise sensitive developments exposed to environmental noise greater than CNEL 60 dBA, or one-family dwellings not constructed as part of a subdivision requiring a final map exposed to environmental noise greater than CNEL 65 dBA. The studies should also satisfy the requirements set forth in Title 24, part 2, of the California Administrative Code, Noise Insulation Standards, for multiple-family attached, hotels, motels, etc., regulated by Title 24.</p> <p>GPA EIR Mitigation Measure NOISE-2b: All new projects The applicant shall show that they comply with maximum noise levels outlined in the City's Noise Ordinance and the average sound level goals outlined in the City's General Plan.</p> <p>GPA EIR Mitigation Measure NOISE-3: New projects in the Northern Waterfront GPA should. The applicant shall submit require acoustical studies, describing how the exterior and interior noise level standards will be met for the proposed project as well as any impacts on adjacent projects. Studies shall also satisfy the acoustical requirements of the City's General Plan, Title 24, of the Uniform Building Code.</p>	Less than Significant	No new or more severe impact

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
D. Noise (cont.)			
Impact 4.D-4: The proposed project would result in exposure of people to cumulative increases in construction noise levels. (Less than Significant with Mitigation)	Implementation of revised GPA EIR Mitigation Measures NOISE-1a and -1b.	Less than Significant	No new or more severe impact
Impact 4.D-5: Increases in traffic from development facilitated by the proposed project in combination with other development could potentially result in cumulatively considerable noise increases. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
E. Population and Housing			
Impact 4.E-1: The proposed project would not induce substantial population or housing growth directly or indirectly. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.E-2: The proposed project would not displace any people or housing units. (No Impact)	None Required	No Impact	No new or more severe impact
Impact 4.E-3: Development facilitated by the proposed project, in conjunction with potential past, present, and future development in the surrounding region, would not result in unanticipated population, housing, or employment growth, or the displacement of existing residents or housing units on a regional level. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
F. Public Services			
Impact 4.F-1: The proposed project would result in an increase in calls for fire protection and emergency medical response services, but would not require new or physically altered fire protection facilities in order to maintain acceptable performance objectives. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.F-2: The proposed project would result in an increase in calls for police services, but would not require new or physically altered police facilities in order to maintain acceptable performance objectives. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.F-3: The proposed project would result in new students for local schools, but would not require new or physically altered school facilities to maintain acceptable performance objectives. (Less than Significant)	None Required	Less than Significant	No new or more severe impact

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
F. Public Services (cont.)			
Impact 4.F-4: The proposed project would result in increased use of other governmental facilities, including libraries, but would not require new or physically altered government facilities to maintain acceptable performance objectives. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.F-5: The proposed project would increase the use of existing neighborhood and regional parks and recreation centers, but not to the extent that substantial physical deterioration of the facilities would occur or be accelerated, nor would it cause the necessity for new or expanded facilities. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.F-6: The proposed project includes recreational facilities and the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.F-7: The project, in conjunction with other past, current, or foreseeable development in Alameda, could result in impacts related to public services and recreation. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
G. Transportation and Circulation			
Impact 4.G-1: The proposed project would not increase average citywide household or employee per capita VMT. (Significant and Unavoidable)	None Required	Significant and Unavoidable	New Impact not Previously Analyzed
Impact 4.G-2: The proposed project would increase traffic volumes at study intersections. (Significant and Unavoidable)	<p>Revised GPA EIR Mitigation Measure TRN-4b (revised): To reduce the number of automobile trips generated by the project and reduce automobile level of service impacts at the Webster Street and Park Street gateways to the City, require that the project include a Transportation Demand Management Plan and funding program for Planning Board review and approval. The TDM plan should include a suite of measures intended to reduce vehicle trips by project residents, employees, and visitors to the site, that may include but are not limited to the following:</p> <ul style="list-style-type: none"> • Annual funding for operations of transit services between the site, the Northern waterfront area, and Oakland BART stations. • AC Transit Easy Passes for all project residents and employees. • On-Site Car Share Parking 		

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
G. Transportation and Circulation (cont.)			
Impact 4.G-2 (cont.)	<ul style="list-style-type: none"> • <u>On-Site Bicycle Parking</u> • <u>Dedicated on-site carpool parking</u> • <u>Residential Website/Source for Transportation Info</u> • <u>Collaborative Work Space</u> • <u>Unbundled Parking</u> • <u>On-Site Transportation Coordinator</u> • <u>Transportation "Welcome Packet"</u> • <u>Real-Time Transit Information (e.g., TransitScreen)</u> • <u>Designated Pick-Up/Drop-Off Ridesourcing Services</u> • <u>Pre-Tax Commuter Benefits</u> • <u>Transit Pass Subsidy Program (e.g., AC Transit EasyPass)</u> • <u>The Planning Board may also consider a congestion pricing system to increase the cost for automobile entering or leaving the project site during peak commute hours.</u> • <u>Implementation and monitoring protocols to ensure progress on the implementation of each measure is tracked. The effectiveness of each measure shall also be studied so that the plan may be adjusted over time to continue to reduce the project's contribution to citywide and regional vehicle trips through the life of the project.</u> <p>NEW Mitigation Measure 4.G-2: To minimize automobile level of service impacts in the vicinity of the project require that the project signalize the intersections at Entrance and Clement and at Entrance and Buena Vista. If the project or other parties construct the final extension of Clement Avenue through the Shell Oil facility, the signalization of Entrance and Buena Vista may not be necessary. The completion of the extension will reduce automobile and truck trips on Buena Vista and eliminate the need for southbound vehicles from the project to use the Buena Vista.</p> <p>NEW Mitigation Measure 4.G-3: To minimize automobile level of service impacts in the vicinity of the project require the Encinal Terminals project to pay for a fair share of the Clement Extension project including fair share contribution to the completion of the Clement Avenue Extension (pedestrian, bicycle, transit, and</p>		

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
G. Transportation and Circulation (cont.)			
Impact 4.G-2 (cont.)	<p>automobile extensions) and intersection signalization from Atlantic Avenue to Grand Avenue. If the Del Monte project fails to begin construction of the Clement Avenue extension from Atlantic to Entrance Road prior to approval of the Encinal Terminals project, require the Encinal Terminals project to construct the extension with a later fair share contribution to be provided by the Del Monte project and other developments within the area.</p> <p>NEW Mitigation Measure 4.G-4: To minimize automobile level of service impacts at the Webster Street and Park Street gateways to the City, require the Encinal Terminals project to pay a fair share contribution to citywide transportation improvements identified in the Citywide Development Impact Fee Ordinance.</p>		
Impact 4.G-3. Implementation of the proposed project would cause the Pedestrian LOS to degrade to worse than LOS B, but would not create a safety hazard for pedestrians. (Less than Significant)	NEW Mitigation Measure 4.G-3a: Prior to project occupancy, the project applicant shall fund the signal optimization at the Buena Vista Avenue and Sherman Street intersection during the p.m. peak hour to reduce pedestrian delays.	Less than Significant	No new or more severe impact
Impact 4.G-4. Implementation of the proposed project would not cause the Bicycle segment LOS to degrade to worse than LOS B or create a safety hazard for bicyclists. (Less than Significant)	NEW Mitigation Measure 4.G-3b: Prior to project occupancy, the project applicant shall fund the signal optimization at the Challenger Drive and Marina Village Drive intersection during the p.m. peak hour to reduce pedestrian delays.	Less than Significant	No new or more severe impact
Impact 4.G-5. Implementation of the proposed project could not cause travel speeds to decrease by 10 percent or more along a street segment that currently serves as a transit route or is planned to serve as a transit route. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.G-6: The proposed project would not substantially increase traffic volumes on area freeways. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.G-7: The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.G-8: The proposed project would result in inadequate emergency access. (Less than Significant)	None Required	Less than Significant	No new or more severe impact

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
G. Transportation and Circulation (cont.)			
Impact 4.G-9: Development facilitated by the proposed project could potentially be inconsistent with adopted policies, plans, and programs supporting alternative transportation. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.G-10: The proposed project would generate temporary increases in traffic volumes on area roadways during construction. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.G-11: The proposed project would result in cumulative transportation impact to intersection levels of service. (Significant and Unavoidable)	Implement Transportation and Circulation mitigation measures listed above.	Significant and Unavoidable	No new or more severe impact
H. Utilities and Service Systems			
Impact 4.H-1: The proposed project would not result in an exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.H-2: The proposed project would not have wastewater service demands that would result in a determination by the service provider that it does not have adequate capacity to serve projected demand, necessitating the construction of new or expanded wastewater treatment facilities. (Less than Significant with Mitigation)	Mitigation Measure 4.H-2: The project sponsors shall: 1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to ensure that such systems and lines are free from defects or, alternatively, disconnected from the sanitary sewer system; and 2) ensure any new wastewater collection systems, including new lateral lines, for the project are constructed to prevent infiltration and inflow (I&I) to the maximum extent feasible while meeting all requirements contained in the Regional Private Sewer Lateral Ordinance and applicable municipal codes or City ordinances.	Less than Significant	No new or more severe impact
Impact 4.H-3: The proposed project would result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.H-4: The proposed project would have sufficient water supplies available to serve the development from existing entitlements and would not require the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant)	None Required	Less than Significant	No new or more severe impact

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED ENCINAL TERMINALS MASTER PLAN

Potential Impact	Mitigation Measures	Level of Significance after any recommended mitigation measures	Comparison to Northern Waterfront GPA EIR Findings
H. Utilities and Service Systems (cont.)			
Impact 4.H-5: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate solid waste generated by the project, and would comply with federal, state, and local statutes and regulations related to solid waste. (Less than Significant)	None Required	Less than Significant	No new or more severe impact
Impact 4.H-6: The proposed project, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in cumulatively considerable impacts to utilities and service systems. (Less than Significant)	None Required	Less than Significant	No new or more severe impact

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CHAPTER 3

Project Description

A. Project Overview

The project sponsor, North Waterfront Cove LLC, is proposing a Master Plan and Density Bonus Application for Encinal Terminals, a new residential mixed use waterfront community on both land and water. Overall, the proposed project would demolish existing structures on the project site and allow for development of up to 589 new housing units, a marina with up to 160 boat slips and a harbormaster's office, between 30,000 and 50,000 square feet of commercial/office and restaurant uses, and over three acres of waterfront-related public open space and parks. Three existing wooden wharves and two concrete wharves on the site would be improved as part of development of the proposed waterfront open space uses, through a combination of demolition, rehabilitation, modification, and/or retrofit activities. The residential unit types proposed include: condominiums, townhomes, lofts, stacked flats, live-work units, and high-rise view residences. Other proposed improvements include establishing locations for launching kayaks and other small watercraft, provisions for future public water taxi/water shuttle or ferry terminal facilities, a new internal roadway system and utility infrastructure, and parking throughout the site. Characteristics of the proposed project are detailed further in this section.

B. Project Objectives

CEQA *Guidelines* Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project.

“A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.”

This section states the project objectives for the CEQA review of the project. The project objectives are:

- Repurpose the site with a mix of residential, open space, commercial, and water-related uses that will create and support a lively waterfront and a pedestrian-friendly environment in proximity to regional transportation systems.
- Provide water and maritime-related job and business opportunities consistent with the site's waterfront location and maritime history.

- Create a continuous public waterfront promenade and sequence of public waterfront open spaces that provide opportunities for walking, biking, kayaking, and other waterfront activities.
- Provide a mix of uses and activities that will support a variety of lifestyles and employment opportunities.
- Assure a significant portion of new residential development is affordable to households at all income levels.
- Establish linkages to the surrounding city and neighborhoods for all modes of travel.
- Provide clear, safe access and linkages for pedestrians and bicyclists, where none have existed in the past.
- Strengthen references to the historic background of the site and environs through design.

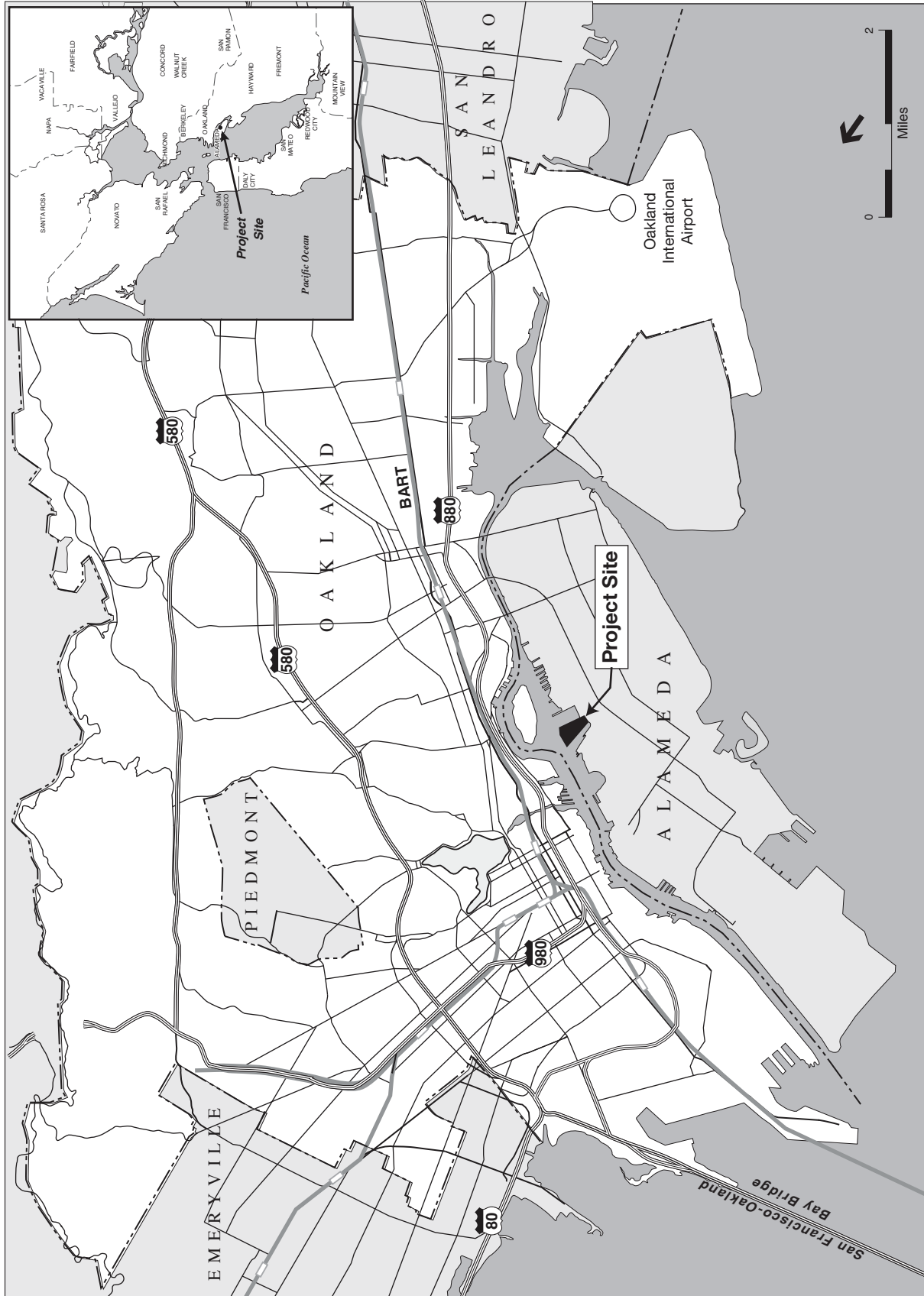
C. Project Location and Surrounding Uses

Regional Setting

The project site is located in the City of Alameda in Alameda County, California. The City of Alameda occupies approximately 10.6 square miles of land area immediately south of the City of Oakland and the Oakland-Alameda Estuary (the “Estuary”), east of San Francisco, and north and east of the San Francisco Bay (the “Bay”). Alameda Island makes up approximately 80 percent of the City’s land area, with the remainder on Bay Farm Island across the San Leandro Channel. The project site location and regional context are presented in **Figure 3-1**. Regional access to the City of Alameda is provided by a variety of transportation modes. Interstate 880 (I-880) through Oakland—the nearest freeway to the project site—provides regional access for automobiles and transit. Regional traffic accesses the project site via State Route 61 (SR 61) through the Webster-Posey Tubes, the Park Street Bridge, the Miller Sweeney Bridge and the High Street Bridge connecting the island of Alameda and the City of Oakland.

Local Setting

The project is located at 1521 Buena Vista Avenue in the north-central portion of the City of Alameda. The project site encompasses 13.35 acres of private land, approximately 10 acres of privately-owned submerged land, and 6.37 acres of State tidelands that are held in trust by the City of Alameda and leased to North Waterfront Cove LLC. The various parcels associated with the site are shown in **Figure 3-2**. Water surrounds the property on three sides with Alaska Basin (called Encinal Basin on some maps) to the west, the Oakland Estuary to the north, and the Fortman Marina to the east. Surrounding land uses in the vicinity include the Wind River office/research park located across Alaska Basin to the west, the Oakland Estuary to the north, the Fortman Marina to the east, and the Del Monte property to the south. Beyond the Del Monte building to the south are primarily single family residential neighborhoods and Littlejohn Park. The project site vicinity is shown in **Figure 3-3**.



SOURCE: ESA, 2013

Encinal Terminals - 130007
Figure 3-1
 Regional Location



SOURCE: ESA

Encinal Terminals . 130007

Figure 3-2
Public Trust Lands



SOURCE: ESA

Encinal Terminals . 130007

Figure 3-3
Project Site Vicinity

D. Site Background and Current Conditions

The project site and the surrounding area were once a vital component of the fish canning industry. Fishing boats delivered their salmon catch to Alaska Basin, where they would be unloaded and then processed on the Del Monte property to the southwest of the project site. Most recently, the project site served as a shipping container storage and maintenance yard; however, that use ended in the early 2009s and the property is now vacant.

The project site is flat with elevations ranging from 4 to 8 feet above mean sea level. The site consists primarily of asphalt and concrete paving, with both concrete and wooden wharves and a wooden pier along the northwestern edge. Two vacant warehouse buildings are located in the center of the site flanking a large metal shed. There are two additional buildings located in the southeastern portion of the site and a third building in the southwestern portion of the site, all of which are also vacant.

Priority Development Area

In July 2013, the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) adopted *Plan Bay Area*. *Plan Bay Area* is an integrated long-range transportation and land-use/housing plan to reduce transportation-related pollution in the San Francisco Bay Area, as required by the California Sustainable Communities and Climate Protection Act of 2008 (California Senate Bill 375, Steinberg) to reduce greenhouse gas emissions from cars and light trucks.

The Northern Waterfront area, which includes the project site, is a Priority Development Area (PDA) in *Plan Bay Area*. PDAs are intended to provide lands for regional employment and housing growth in proximity to regional transportation systems to reduce greenhouse gas emission and combat climate change.

Public Trust Lands

The proposed project could include a proposed land exchange involving the 6.37-acre tidelands parcel that is currently leased from the California State Lands Commission (CSLC) on the one hand, and the waterfront areas of the property, including the proposed publicly accessible promenade on the Alaska Basin and northern sides of the site on the other hand. In the event that the land exchange is not approved, an alternate land use plan would be adopted.

The State of California's Public Trust doctrine gives the state title to tidelands and submerged lands that existed at the time of statehood in 1850. Lands subject to the Public Trust ("Trust Lands") are held in trust by the State of California on behalf of the public and are to be used to promote Public Trust purposes. The State may grant control of such lands to local entities as trustees, subject to Public Trust restrictions on their use. The Public Trust generally limits the allowable uses on Trust Lands (whether filled or unfilled) to uses that further the purposes of the Trust, including maritime-related uses, water-oriented recreation, visitor-serving facilities, habitat preservation, and scientific study. Residential uses are generally prohibited.

Northern Waterfront General Plan Amendment

This EIR has been prepared to evaluate the proposed changes to the Encinal Terminals project originally presented in the Northern Waterfront General Plan Amendment (GPA) EIR. The Alameda City Council adopted the Northern Waterfront GPA and certified the Final EIR in July 2007.

The City adopted the Northern Waterfront GPA to provide a planning framework for future growth and redevelopment of a collection of primarily industrial parcels located along the City's north-central shoreline. The purpose of the Northern Waterfront GPA was to establish General Plan and Zoning Ordinance policies, design standards, and requirements for future development while encouraging economically viable redevelopment of the area with a mix of uses that would be sensitive to existing residential neighborhoods and the historic character of the area.

The Northern Waterfront GPA planning area is generally bounded by Sherman Street on the west, Buena Vista Avenue on the south, Grand Street on the east, and the Oakland/Alameda Estuary on the north. Encinal Terminals is a sub-area within the Northern Waterfront GPA planning area. The GPA Planning Area is presented in **Figure 3-4**.

The Northern Waterfront GPA evaluated the proposed buildout of the Encinal Terminals site to include 165 residential units and 200,000 square feet of commercial development. As described in the GPA:

The Northern Waterfront GPA would require a mix of land uses on the [project] site, including residential development, commercial, (retail, restaurant and/or office), and parks and open space. Since the optimum combination of future uses has not been determined at this time, the Northern Waterfront GPA proposes flexibility, within limits, for future development of this site.

Since adoption of the GPA in 2007, the Grand Marina Village property has been developed, and a 380 unit residential mixed use plan has been approved for the Del Monte property.

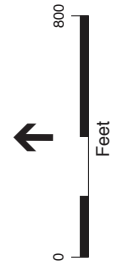
E. Project Description

Master Plan

The proposed Encinal Terminals project includes demolition of existing structures on the site and development of a new residential mixed use waterfront community. Initial discretionary approvals for Encinal Terminals include a Master Plan and a Large Lot Tentative Map. **Figure 3-5** shows a conceptual layout of the Encinal Terminals site within the context of other nearby Northern Waterfront GPA components. Overall, the proposed Master Plan describes the characteristics of future development on the project site and the placement and capacity of utilities and circulation infrastructure. The proposed project would be a residential community with a mix of restaurants and commercial uses, which could include artist studios and galleries, maritime and craftsman work spaces, a marina, work/live studios, retail establishments, kayak and bicycle rental shops, and multiple public gathering spaces. A shoreline public promenade, offering views of the Oakland skyline and hills, the Oakland Estuary and Coast Guard Island would encircle the proposed residential mixed use community.



— General Plan Amendment Area



Encinal Terminals . 130007

Figure 3-4
Northern Waterfront GPA Planning Area

SOURCE: ESA



Encinal Terminals . 130007

Figure 3-5

Encinal Terminals Master Plan

SOURCE: Carlson, Barbee & Gibson, Inc.

The proposed project would include construction of the following components:

- Approximately three acres of waterfront-related public open space and parks, including public access around the entire perimeter of the property.
- A new marina with up to 160 private berths and a harbormaster's office with facilities for boat sales and rentals including small crafts such as kayaks, row boats and board sailing equipment.
- A mixed-density residential neighborhood, with up to 589 residential dwelling units in a variety of configurations, including townhomes, stacked flats, live/work, lofts, and high-rise view residences.
- Between 30,000 and 50,000 square feet of retail, restaurant, and office uses along Clement Avenue and along the waterfront.
- A new internal grid of public streets and public infrastructure.
- Accessible public waterfront parking strategically located at various points to allow access to the waterfront perimeter.
- Locations for direct public access to the water, including kayak/small craft launches, waterfront steps and ramps.
- Provisions for future public water shuttle, water taxi or ferry terminal facilities.
- Development of a segment of Clement Avenue fronting the property.
- Rehabilitation of wharf surfaces or supporting pilings.

The project applicant has proposed a land exchange that would involve the tidelands parcel that is leased from the City as trustee for the CSLC and the waterfront areas of the property, including the proposed publicly accessible promenade on the Alaska Basin and northern sides of the site. In the event that a land exchange is not approved an alternate land use plan would be adopted for the site that would include an equivalent amount of development in an alternative configuration that would limit the proposed residential uses to lands currently owned by the applicant.

Land Use

The Master Plan identifies the following range of permitted land uses based on whether the proposed land use would be located within the Tidelands Area or the Non-Tidelands Area of the project site.

Tidelands Area:

- Public recreation facilities, hotels, restaurants, waterfront commercial recreation, and attractions
- Public waterfront promenades, pedestrian trails, sidewalks, landscaped areas
- Public Parks and open space
- Streets, parking, landscaped areas

- Maritime related industry (excluding boat repair and storage), boat sales with limited outside display, rentals, leasing, marina berths

Non-Tidelands Area:

- Commercial retail, but not including “super store” type retail commercial uses or drive-through commercial facilities
- Hotels, restaurants, taverns and associated parking and landscape areas
- Office or medical facilities
- Commercial Recreational uses
- Multi-Family Residential Units
- Roadways, Private and Public Parks and Open Space and Playgrounds
- Home Occupations consistent with Alameda Municipal Code Section 30-2
- Artist Studios and Galleries and Museums
- Performance, Entertainment, Amphitheater, Amusement Parks but not multiplexes
- Maritime – boat sales, rentals, leasing, marina berths
- Light warehousing, light manufacturing conditionally permitted with Planning Board approved Use Permit and finding that the use will not generate significant truck traffic
- Farmers Markets and Community Gardens
- Other uses determined by the Planning Board to be similar to the above and consistent with the plan objectives

A full review of permitted land uses by subarea is contained within the Master Plan, which is attached to this EIR as **Appendix C**.

Circulation, Public Access and Parking

Off-site Roadways

Clement Avenue would be extended along the frontage of the Encinal Terminals project area from the intersection of Entrance Road to a point approximately 400 feet to the west, as shown in **Figure 3-5**. The roadway would be designed and constructed for a maximum operating speed of 25 miles per hour to reduce noise and calm traffic flow past residential areas.

Internal Street System

An internal street system would be constructed to provide access to the public open spaces, commercial uses, and residential development. The street system would be designed to support bicyclists, pedestrians, and automobiles. **Figure 3-6** shows a conceptual cross section of the perimeter roadway along the western portion of the site abutting Alaska Basin.

Opportunities for water transit facilities would be provided along the western and northern edge of the site.



SOURCE: GLS Landscape/Architecture

Encinal Terminals . 130007

Figure 3-6
Western Entry Road and Waterfront Promenade
at Clement Avenue (View North)

Waterfront Access

A continuous public shoreline promenade area would be provided around the waterfront on the west and north sides of the site, tying into the existing public access on the Fortmann Marina property. **Figure 3-7** provides a conceptual cross-section view of the promenade. The promenade would include a sequence of open spaces and recreational opportunities including walking, running, bicycling, rollerblading, fishing, watercraft launch, and vista points, and would include the necessary structural and safety improvements, allowing convenient pedestrian access to the Alaska Basin and Encinal Terminals site. **Figure 3-8** shows a sectional view of the Waterfront park that would be located at the northern end of the site.

Parking

The Master Plan would establish specific parking supply rates for each use. Public parking would also be provided on site.

Public Transit

The project site would be served by AC Transit Line 19, a new bus line that began operation in December 2016, that connects new development in the Northern Waterfront area to the nearby Downtown Oakland and Fruitvale Bay Area Rapid Transit (BART) stations via Buena Vista Avenue. In addition, the project site is located approximately 2.6 miles southeast of the Alameda Ferry Terminal at 2660 Main Street, which provides service to San Francisco.

Transportation Demand Management Plan

The Transportation Demand Management (TDM) plan would include: 1) an annual fee per residential unit and a per square foot fee for commercial space, which would be applied to transit services; 2) participation in a Transportation Management Authority (TMA) with representation from each phase of the development that would be established to manage the Transit Fund and plan appropriate transportation programs (or membership in other existing TMA's); 3) provision of transit services (private or AC/Transit bus and/or water shuttle) to BART beginning on the first day of occupancy; and 4) an annual report to the City evaluating the effectiveness of the TDM measures.

The TDM measures may be combined with other developments to more effectively manage the program and may include: shuttle services, AC Transit EasyPasses, car share programs and parking programs provided with funds from annual fees and any onsite parking revenues.

Infrastructure

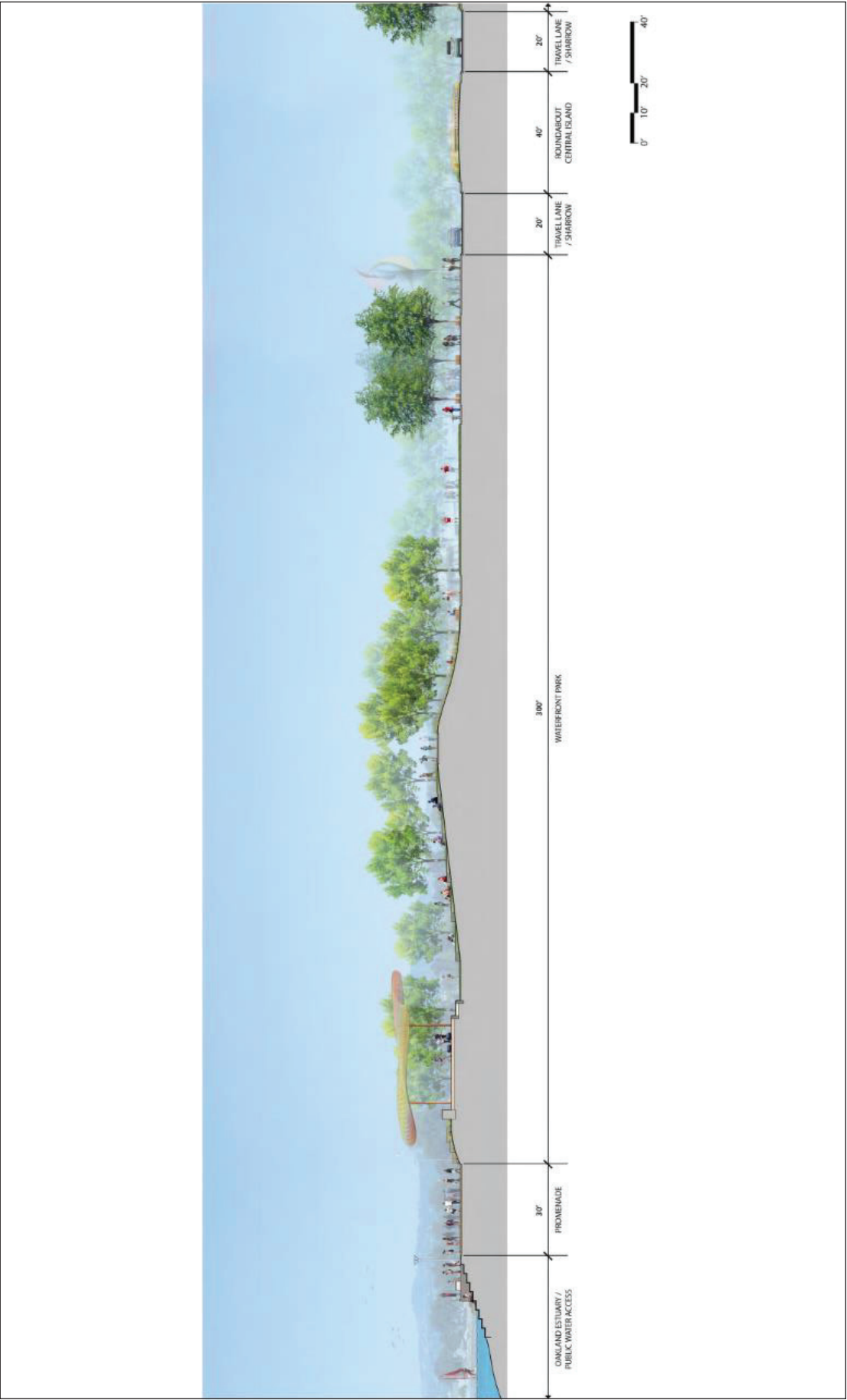
The proposed project would replace the existing utility infrastructure with updated utility systems that would include stormwater, wastewater, potable water, electrical, natural gas and telecommunications. All systems would be designed in accordance with applicable standards. A flood protection system would also be constructed for the project site that would provide protection from the anticipated impacts of climate change and sea level rise.



SOURCE: Carlson, Barbee & Gibson, Inc.

Encinal Terminals - 130007

Figure 3-7
Conceptual Cross Section of Waterfront Promenade
Along Northern Edge of Site (view east)



SOURCE: Carlson, Barbee & Gibson, Inc.

Encinal Terminals - 130007
Figure 3-8
 Sectional View of Waterfront Park (facing east)

Flood and Sea Level Rise Protection

The existing topography of the project site is generally flat with elevations ranging from 4 to 8 feet above the mean high tide level (six to eight feet above mean sea level). The project site is not located in a 100-year floodplain as defined by the Federal Emergency Management Agency (FEMA) and the majority of the site sits above the 100-year tidal elevation for this area of the City, which is estimated at 3.9 feet¹ (Northern Waterfront Cove, LLC, 2016). To address anticipated sea level rise of two feet (24 inches) by 2050 the project would be required to provide protection from flooding to a level two feet above the 100-year tidal elevation, or 5.9 feet. As described in the Master Plan, the project would establish a minimum first habitable floor elevation of 6.5 feet within the project site, which would exceed the flood protection requirements for 2050 by over half-a-foot.

By 2100 the project would be required to provide protection from the 100-year tidal elevation, plus up to 4.5 feet of sea level rise for a combined elevation of 8.4 feet. As such, the Master Plan proposes that the perimeter of the site be reserved for the construction of future flood control measures, such as a sea wall or levee, that would provide protection against an additional 2.4 feet of sea level rise (1.9 feet beyond the first habitable floor level) that could occur by the end of the century. The Master Plan further proposed that all future flood control measures be constructed in a manner that would avoid introducing additional fill materials into the estuary.

Stormwater System

The majority of the storm run-off from the project site is collected by onsite inlets and conveyed to various private onsite outfalls that discharge directly to the Oakland Estuary. The southernmost portion of the site is collected and conveyed to the City of Alameda's storm drain system, eventually discharging to the Arbor Street Pump Station.

The proposed storm drain system improvements would maintain the existing patterns of the project site. The proposed system would include the installation of new inlets and pipelines appropriately sized to convey the site run-off. The proposed collection pipelines would range in size from 12 to 24 inches in diameter. The portions of the system that directly discharge to the Oakland Estuary would likely require improved outfall structures that the project would implement. This would require permits from the various regulatory and environmental agencies. The remainder of the project site would be collected and conveyed by a new system of inlets and pipelines to connect to the City's 54-inch pipeline, which eventually discharges to the Arbor Street Pump Station. In accordance with Alameda County Clean Water Program guidelines, bio-treatment areas would be established throughout the project site to treat runoff from impervious areas. Further, the project would decreased the amount of impervious surface on the site. Proposed bio-treatment areas would be integrated with landscaping areas adjacent to street and parking areas or buildings to the extent feasible.

¹ City of Alameda Datum.

Wastewater System

The City of Alameda owns and maintains local sanitary sewer pipelines within the public streets, which collect and convey wastewater to East Bay Municipal Utility District (EBMUD) conveyance and treatment facilities. Currently, the wastewater generated from the project site is collected and conveyed by an existing 10-inch pipeline that falls east to west towards Sherman Street. This pipeline is privately owned and maintained. It is aligned along the north side of the Del Monte Warehouse. The 10-inch pipeline extends to Sherman Street and connects into the City of Alameda collection system near the intersection with Eagle Avenue. The City's pipelines within Sherman Street range in size from eight to 12 inches and flow from north to south. The 12-inch pipeline in Sherman Street connects to the EBMUD 60-inch interceptor pipeline at the intersection with Buena Vista Avenue.

The proposed project would abandon or remove the existing private wastewater collection facilities and install new sewer pipelines throughout the project site. These new pipelines would connect to the EBMUD interceptor in Buena Vista Avenue from a City-owned manhole. The onsite sewer collection system would include new pipelines ranging in size from 6 to 8 inches. A pump/lift station would be constructed to minimize the depth of the proposed system. The proposed wastewater facilities extending off-site would be installed in the western site entrance road along the eastern side of the Del Monte Warehouse, conveying the project site wastewater from the site and potentially other surrounding properties southerly to Buena Vista Avenue. In Buena Vista Avenue, a short segment of pipeline would be constructed flowing westerly to connect to an existing manhole on the EBMUD interceptor.

Potable Water

EBMUD also provides potable water service to the City of Alameda and the project site. EBMUD owns and maintains the existing pipelines within Buena Vista Avenue, Sherman Street and Clement Avenue. There is a 12-inch pipeline in Buena Vista Avenue, an 8-inch pipeline in Sherman Street and an 8-inch pipeline in Clement Avenue to the east. Existing private water pipelines extend from the EBMUD distribution system to the existing structures within the project site. The project site is currently served by existing pipelines ranging in size from 6 inches to 15 inches that run along the northern side of the Del Monte Warehouse.

The proposed project would construct new potable water pipelines within Clement Avenue and the site's western entrance road to serve the project site. These facilities would be owned and maintained by EBMUD and would range in size from 8 inches to 12 inches. Within the project site, potable and fire water pipelines would extend from the pipelines in Clement Avenue and the western entrance road. These pipelines would range in size from 6 inches to 8 inches in diameter.

Dry Utilities

Electric

Alameda Municipal Power provides electric service to the project site. Existing transmission lines extend along Buena Vista Avenue, and would be the electrical source for the project. A new joint trench would be constructed from the source to and throughout the project site. A joint trench

would be constructed in the site's western entrance road and would connect to the facilities in Clement Avenue, and would include new facilities for all dry utility systems.

Natural Gas

Pacific Gas & Electric (PG&E) provides natural gas service to the project site. As described above, a new joint trench would be constructed in the site's western entrance road and would connect to the facilities in Clement Avenue.

Telecommunications

AT&T would provide telecommunication service to the project site. A new joint trench would be constructed from the source to and throughout the project site. The joint trench would include new facilities for all dry utility systems.

Affordable Housing

The project developer would enter into an Affordable Housing Agreement with the City of Alameda for the provision of onsite housing affordable to moderate-, low-, and very low-income households consistent with Alameda Municipal Code (AMC) Section 30-16. Consistent with AMC Section 30-16, a minimum of four percent of all units would be affordable to very-low income households, four percent would be affordable to low-income households, and seven percent would be affordable to moderate-income households. In addition, this project requires approval of a Density Bonus Application pursuant to State of California Section 65915 and AMC Section 30-17 Affordable Housing Density Bonus. Proposals that qualify under AMC Section 30-17 may be granted additional residential density and waivers from local development standards, subject to and consistent with AMC Section 30-17.

Phasing Requirements

The project may be constructed and occupied in phases; the phasing may need to be adjusted from time to time due to economic conditions, public infrastructure improvements, or land acquisition timing. Construction is planned to begin in 2018, with the completion of the first phase of the project in 2020 and full project completion in approximately 2022.

F. Project Entitlements and Approvals

The proposed project would be presented to the City of Alameda Planning Board for comment, review and recommendations. The Alameda City Council, as the City's legislative body, is the approving authority for the Encinal Terminals Master Plan. In addition to the City of Alameda, which is the lead agency under CEQA, a number of other public agencies may use this EIR in their decision-making, and a number of other discretionary permits and approvals associated with the project would be required. **Table 3-1** lists permits and approvals required by the Lead Agency, responsible agencies, trustee agencies, and federal agencies that may have authority over certain portions of the proposed project.

**TABLE 3-1
MAJOR PROJECT APPROVALS REQUIRED**

Lead Agency	
City of Alameda	<ul style="list-style-type: none"> • General Plan Amendment to allow buildings over 60 feet in height • Approval of the Master Plan and Subdivision Approvals (e.g., large lot tentative tract map) • Development Plan and Design Review approvals for individual buildings • Affordable Housing Plan approval • Approval of a Density Bonus Application pursuant to State of California Section 65915 and AMC Section 30-17 Affordable Housing Density Bonus and a Waiver for Height pursuant to AMC Section 30-17 • Ministerial Permits (including demolition, construction, building or grading permits)
Responsible Agencies	
State Lands Commission	<ul style="list-style-type: none"> • Agreement on the proposed land exchange involving the parcel leased from CSLC and the proposed publicly accessible promenade on the Alaska Basin and northern sides of the project site
San Francisco Bay Conservation and Development Commission (BCDC)	<ul style="list-style-type: none"> • Approval of any development located within 100 feet of the shoreline
Alameda Municipal Power	<ul style="list-style-type: none"> • Approval of electricity hookup and review of electricity needs
East Bay Municipal Utility District (EBMUD)	<ul style="list-style-type: none"> • Approval of water line, water hookups and review of water needs • Approval for sewer treatment capacity
California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB)	<ul style="list-style-type: none"> • National Pollutant Discharge Elimination System (NPDES) NPDES General Construction Permit and Storm Water Pollution Prevention Plan • RWQCB Permits • Potential Clean Water Act Section 401 Certification/Waste Discharge Requirements (WDR's)
California Department of Toxic Substances Control (DTSC)	<ul style="list-style-type: none"> • Approval and oversight of hazardous materials remediation if needed
Bay Area Air Quality Management District (BAAQMD)	<ul style="list-style-type: none"> • Permits
Federal and State Agencies	
US Army Corps of Engineers	<ul style="list-style-type: none"> • Clean Water Act Section 404 Authorization, if needed
US Fish and Wildlife Service	<ul style="list-style-type: none"> • Applicable permits, if needed
California Department of Fish and Wildlife	<ul style="list-style-type: none"> • Applicable permits, if needed
National Marine Fisheries Service	<ul style="list-style-type: none"> • Applicable permits, if needed

References

City of Alameda, 1991. *City of Alameda General Plan*. <http://www.cityofalamedaca.gov/City-Hall/General-Plan>, accessed March 3, 2013.

City of Alameda, 2010. *City of Alameda Zoning Map*. Community Development. <http://www.cityofalamedaca.gov/City-Hall/Zoning-Map>, accessed March 3, 2013.

CHAPTER 4

Environmental Setting, Impacts, and Mitigation Measures

This Draft EIR has been prepared in accordance with CEQA, as amended (Public Resources Code § 21000, et seq.), and the CEQA *Guidelines* (California Code of Regulations § 15000 through 15378).

This chapter contains the analysis of the potentially significant adverse effects on the environment (significant impacts) due to the proposed development at the Encinal Terminals project site. This chapter describes the existing setting for each topic, the potentially significant impacts that could result from the construction and operation of new development and infrastructure at the site, and relevant plans and policies that would minimize or avoid potential adverse environmental impacts that could result. Finally, this chapter identifies mitigation measures that would reduce the significant impact resulting from the proposed project.

The following provides an overview of the scope of the analysis included in this chapter, the organization of the sections, and the methods for determining significant impacts.

Environmental Topics

The following sections in this chapter analyze the environmental topics as listed below and presented in the Table of Contents at the front of this document:

4.A Air Quality and Climate Change	4.E Population and Housing
4.B Biological Resources	4.F Public Services
4.C Land Use	4.G Transportation and Circulation
4.D Noise	4.H Utilities and Service Systems

The remaining environmental impact topics were analyzed in the Initial Study, contained in **Appendix A** of this EIR.

Format of Environmental Topic Sections, Impact Statements and Mitigation Measures

Each environmental topic section generally includes two main subsections:

- **Existing Setting** – includes baseline conditions, regulatory setting, Thresholds/Criteria of Significance; and

- **Impacts and Mitigation Measures** – identifies and discusses the potential impacts and mitigation measures that would, to the extent possible, reduce or eliminate adverse impacts identified in this chapter.

This EIR identifies all impacts with an alpha-numeric designation that corresponds to the environmental topic addressed in each section (e.g., “4.D-1” for Section 4.D, *Noise*). The topic designator is followed by a number that indicates the sequence in which the impact statement occurs within the section. For example, “Impact 4.D-1” is the first (i.e., “1”) impact identified in Section 4.D of the EIR. All impact statements are presented in bold text.

The Impact Classification of the project’s effects prior to implementation of mitigation measures is stated in parentheses immediately following the impact statement.

Similarly, each mitigation measure is numbered to correspond with the impact that it addresses. Where multiple mitigation measures address a single impact, each mitigation measure is numbered sequentially. For example “Mitigation Measure 4.D-1” is the first mitigation identified to address the first noise impact (i.e., “4.D-1”).

Thresholds/Criteria of Significance

The CEQA *Guidelines* § 15382 defines a significant effect on the environment as “*a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.*” Determinations of significance vary with the physical conditions affected and the setting in which the change occurs. The significance criteria used in this EIR are the thresholds for determining significance of potential impacts and are based on Appendix G of the CEQA *Guidelines*.

Impact Classifications

The following level of significance classifications are used throughout the impact analysis in this EIR:

- **Less than Significant (LS)** – The impacts of the proposed project do not reach or exceed the defined Threshold/Criteria of Significance. Generally, no mitigation measure is required for a LS impact.
- **Significant (S)** – The impact of the proposed project is expected to reach or exceed the defined Threshold/Criteria of Significance. Feasible mitigation measures are identified to reduce the significant impact to a less than significant level.
- **Significant and Unavoidable (SU)** – The impact of the proposed project reaches or exceeds the defined Threshold/Criteria of Significance. No feasible mitigation measure is available to reduce the S impact to LS. In these cases, feasible mitigation measures are identified to reduce the S impact to the maximum feasible extent, and the significant impact is considered SU. Impacts are also classified as SU if a feasible mitigation measure is identified that would

reduce the impact to LS, but the approval and/or implementation of the mitigation measure is not within the District's sole control, in which case the analysis cannot presume implementation of the mitigation measure and the resulting LS impact. It is important to clarify that SU is an impact classification that only applies *after* consideration of possible mitigation measures.

- **No Impact (N)** – No noticeable adverse effect on the environment would occur.

Environmental Baseline

Overall, pursuant to CEQA *Guidelines* §15125(a), this EIR measures the physical impacts of the proposed project (i.e., the development and operations at Encinal Terminals) against a “baseline” of physical environmental conditions at and in the vicinity of the project site. The environmental “baseline” is the combined circumstances existing around the time the Notice of Preparation of the EIR was published, which was April 27, 2016. In most cases, the baseline conditions relevant to the environmental topic being analyzed are described within each environmental topic section in this chapter.

Cumulative Analysis

Approach to the Cumulative Analysis

CEQA defines cumulative as “two or more individual effects which, when considered together, are considerable, or which can compound or increase the other environmental impacts.” CEQA *Guidelines* § 15130 requires that an EIR evaluate potentially significant environmental impacts when the project's incremental effect is cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past, present, existing, approved, pending and reasonably foreseeable future projects. These impacts can result from a combination of the proposed project together with other projects causing related impacts. “The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects.” The analysis approach for this EIR included “past, present, existing, approved, pending and reasonably foreseeable future projects.”

Cumulative Context

The context used for assessing cumulative impacts typically varies depending on the specific topic being analyzed to reflect the different geographic scope of different impact areas. For example, considerations for the cumulative air quality analysis are different from those used for the cumulative analysis of land use. In assessing land use impacts, only development within the vicinity of the project would contribute to a cumulative land use effect. In assessing 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 effect. Accordingly, the geographic setting and other parameters of each cumulative analysis discussion can vary.

The cumulative analysis for water demand, wastewater generation, solid waste generation, and energy usage (i.e., topics influenced by physical construction activity, direct population and or user demand) was based on evaluating the project and the cumulative development in the context of the overall development in the City of Alameda.

The cumulative analysis for traffic and the related air quality, GHG/climate change, and noise were based on existing counts (reflecting past and present projects) and growth reflected in the Alameda County travel demand model projections, which reflects traffic from projects in Oakland and countywide and that were applied to develop 2035 traffic growth projections for project study roadways (as described in Section 4.G, *Transportation and Circulation*). Past and present cumulative projects are primarily reflected in the existing or near-term conditions reported for certain environmental topics.

All development identified in the *General Plan* and *Housing Element* and reasonably foreseeable projects were considered in the cumulative analysis, especially as related to the development of the cumulative land uses in the traffic model. Cumulative development was analyzed by adding the project and foreseeable projects to assess cumulative traffic impacts, as well as air quality and noise. Cumulative analysis for population, employment, housing, water demand, wastewater generation, and solid waste generation were based on evaluating the project and the identified reasonably foreseeable projects in the context of the Alameda General Plan and master plans prepared by service providers.

Generally, the projects listed above were used to identify past, present, existing, approved, pending and reasonably foreseeable future projects in the vicinity of the proposed project. It should be noted, however, that this list is not an exclusive list of cumulative projects considered in this EIR. As discussed above, the cumulative context considered in the analysis can vary by environmental topic; therefore, some of the projects listed above may not be directly relevant to the cumulative context for each topic.

The cumulative discussions in each topical section throughout this chapter describe the cumulative geographic context considered for each topic at a level appropriate to the level of analysis presented in this EIR. Cumulative impacts from the proposed project, per CEQA *Guidelines* §15130, are further address in Chapter 6 of this EIR, under *B. Cumulative Impacts*.

References

California Environmental Quality Act (CEQA) Statutes and Guidelines; Public Resources Code 21000-21177) and California Code of Federal Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387. 2010.

A. Air Quality and Climate Change

A.1 Introduction

This section addresses the impacts of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations, including the type and quantity of emissions that would be generated by construction and operation of the project. This section incorporates results from the *Encinal Terminals Air Quality Impact Analysis* (LSA, 2017), included in this EIR as Appendix D, and focuses on whether the proposed project would cause an exceedance of a State or national ambient air quality standard, a health based standard for exposure to toxic air contaminants, or a CEQA threshold recommended by the Bay Area Air Quality Management District (BAAQMD), and whether it would conflict with regulatory goals associated with greenhouse gas emissions that contribute to climate change.

A.2 Air Quality Environmental Setting

Physical Setting

Climate and Meteorology

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and San Francisco Bay), determine the effect of air pollutant emissions on local air quality.

The project site is located in the City of Alameda and is within the boundaries of the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB encompasses the nine-county region, which is all of Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin and Napa counties, and the southern portions of Solano and Sonoma counties. The climate of the SFBAAB is determined largely by a high-pressure system that is almost always present over the eastern Pacific Ocean off the West Coast of North America. During winter, the Pacific high-pressure system shifts southward, allowing more storms to pass through the region. During summer and early fall, when few storms pass through the region, emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are conducive to the formation of photochemical pollutants, such as ozone, and secondary particulates, such as nitrates and sulfates.

The project site is within the Northern Alameda/Western Contra Costa County climatological subregion of the SFBAAB, with specific topographic and climatological conditions described in the BAAQMD *California Environmental Quality Act Air Quality Guidelines* (BAAQMD, 2012a). This climatological subregion stretches from Richmond to San Leandro. Its western boundary is defined by the San Francisco Bay and its eastern is boundary by the Oakland-Berkeley Hills. The Oakland-Berkeley Hills have a ridge line height of approximately 1,500 feet above sea level, which represents a significant barrier to air flow. In this area, marine air traveling

through the Golden Gate, as well as across San Francisco and through the San Bruno Gap, is a dominant weather factor. The Oakland-Berkeley Hills cause the westerly flow of air to split to the north and south of Oakland, which causes diminished wind speeds. The air pollution potential is lowest for the parts of the subregion that are closest to the San Francisco Bay, due largely to good ventilation and less influx of pollutants from upwind sources. The occurrence of light winds in the evenings and early mornings occasionally causes elevated pollutant levels.

Wind measurements taken at the northern end of Alameda Island indicate that the predominant wind flow is from the west and northwest. The prevailing wind direction is westerly with a 57 percent frequency for wind within the northwest-southwest sector. The average speed for this sector is 9 miles per hour (mph) and ranges from 7 to 10 mph. Winds less than 5 mph occur 30 percent of the time. Maximum temperatures in summer average in the upper 60° Fahrenheit (F) range, with minimum in the mid-50° F range. Winter highs are in the mid-50° F range and winter lows in the mid-40° F range. Sunshine is somewhat scarcer than at stations located inland. Daily and seasonal oscillations of temperature are small because of the moderating effects of the nearby ocean. In contrast to the steady temperature regime, rainfall is highly variable and confined almost exclusively to the “rainy” period from early November to mid-April. Alameda/Oakland averages 20 inches of precipitation annually, but because much of the area’s rainfall is derived from the fringes of mid-latitude storms, a shift in the annual storm track of a few hundred miles can mean the difference between a very wet year and near drought conditions.

Existing Air Quality

Criteria Air Pollutants

As required by the federal Clean Air Act (CAA) passed in 1970, the U.S. EPA has identified six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. The U.S. EPA calls these pollutants “criteria air pollutants” because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead are the six criteria air pollutants.

BAAQMD and the California Air Resources Board (CARB) operate a regional air quality monitoring network that measures the ambient concentrations of the six criteria air pollutants. Data from these stations record existing air pollutant levels. Probable future levels of air quality in the project area can generally be inferred from ambient air quality measurements conducted at the nearest monitoring stations by examining trends over time. The closest monitoring stations are in Oakland on 21st Street and International Boulevard. The nearest station that monitors PM₁₀ is the San Pablo and 1865 Rumrill Boulevard monitoring station. **Table 4.A-1** shows a three-year (2013 through 2015) summary of monitoring data for CO, ozone, PM₁₀, PM_{2.5}, NO₂ and SO₂ recorded at the nearest stations.

**TABLE 4.A-1
SUMMARY OF AIR QUALITY MONITORING DATA (2013–2015)**

Pollutant	Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured ^a		
		2013	2014	2015
Carbon Monoxide (CO) at Oakland - 1100 21st Street				
Maximum 1-hr Concentration (ppm)		3.8	3	4.7
Days State Standard Exceeded	>20 ppm ^b	0	0	0
Days Federal Standard Exceeded	>35 ppm ^c	0	0	0
Maximum 8-hr Concentration (ppm)		3.2	2.6	2.6
Days State Standard Exceeded	>9 ppm ^b	0	0	0
Days Federal Standard Exceeded	>9 ppm ^c	0	0	0
Ozone (O ₃) at Oakland - 1100 21st Street				
Maximum 1-hr Concentration (ppm)		0.071	0.072	0.091
Days State Standard Exceeded	>0.09 ppm ^b	0	0	0
Maximum 8-hr Concentration (ppm)		0.059	0.059	0.064
Days State Standard Exceeded	>0.07 ppm ^b	0	0	0
Days Federal Standard Exceeded	>0.08 ppm ^c	0	0	0
Course Particulates (PM ₁₀) at San Pablo – 1865 Rumrill Boulevard				
Maximum 24-hr Concentration (µg/m ³)		45.6	44.3	43.0
Days State Standard Exceeded	>50 µg/m ^b	0	0	0
Days Federal Standard Exceeded	>150 µg/m ^c	0	0	0
Annual arithmetic average concentration (µg/m3)		17.8	16.0	18.4
State Standard Exceeded for the Year	>20 µg/m ^{3b}	No	No	No
Federal Standard Exceeded for the year	>50 µg/m ^{3c}	No	No	No
Fine Particulates (PM _{2.5}) at Oakland – 9925 International Boulevard				
Maximum 24-hr Concentration (µg/m ³)		37.9	37.6	44.7
Days Federal Standard Exceeded	>35 µg/m ^c	2	1	1
Annual arithmetic average concentration (µg/m3)		10.3	8.5	ND
State Standard Exceeded for the Year	>12 µg/m ^{3b}	No	No	ND
Federal Standard Exceeded for the year	>12 µg/m ^{3c}	No	No	ND
Nitrogen Dioxide (NO ₂) at Oakland - 1100 21st Street				
Maximum 1-hr Concentration (ppm)		0.063	0.056	0.057
Days State Standard Exceeded	>0.25 ppm ^b	0	0	0
Annual arithmetic average concentration (ppm)		0.017	.014	0.014
Federal Standard Exceeded for the year	>0.053 ppm ^c	No	No	No
Sulfur Dioxide (SO ₂) at Oakland - 1100 21st Street				
Maximum 1-hr Concentration (ppm)		0.050	0.017	0.022
Days State Standard Exceeded	>0.25 ppm ^b	0	0	0
Maximum 3-hr Concentration (ppm)		ND	ND	ND
Days Federal Standard Exceeded	>0.50 ppm ^c	ND	ND	ND
Maximum 24-hr Concentration (ppm)		0.007	0.003	0.004
Days State Standard Exceeded	>0.04 ppm ^b	0	0	0
Days Federal Standard Exceeded	>0.14 ppm ^c	0	0	0
Annual arithmetic average concentration (ppm)		ND	ND	ND
Federal Standard Exceeded for the year	>0.030 ppm ^b	ND	ND	ND

NOTES:

Bold values are in excess of applicable standard. "NA" indicates that data is not available.

conc. = concentration; ppm = parts per million; ppb=parts per billion;

µg/m³ = micrograms per cubic meter

ND = No data or insufficient data.

^a Number of days exceeded is for all days in a given year, except for particulate matter. PM₁₀ and PM_{2.5} are monitored every six days.

^b State standard, not to be exceeded.

^c Federal standard, not to be exceeded.

SOURCE: LSA, 2016.

While the data gathered at these monitoring stations may not necessarily reflect the unique meteorological environment of the project site nor the proximity of site-specific stationary and street sources, they do present the nearest available benchmark and provide the reader with a reference point to what the pollutants of greatest concern are in the region and the degree to which the area is out of attainment with specific air quality standards.

Carbon Monoxide

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal. As shown in Table 4.A-1, the state and federal 1-hour and 8-hour CO standards were not exceeded between 2013 and 2015.

Ozone

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG, also sometimes referred to as volatile organic compounds or VOC by some regulating agencies) and nitrogen oxides (NO_x). The main sources of ROG and NO_x, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Table 4.A-1 shows that, according to published data, the 1-hour state standard of 0.09 ppm for ozone was not exceeded between 2013 and 2015.

Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Particulate matter is measured in two size ranges: PM₁₀ for particles less than 10 microns in diameter, and PM_{2.5} for particles less than 2.5 microns in diameter. In the Bay Area, motor vehicles generate about one-half of the air basin's particulates, through tailpipe emissions as well as brake pad and tire wear. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. Among the criteria pollutants that are regulated, particulates represent a serious ongoing health hazard. As long ago as 1999, BAAQMD was reporting, in its CEQA Guidelines, that studies had shown that elevated particulate levels contribute to the death of approximately 200 to 500 people per year in the Bay Area. Compelling evidence suggests that PM_{2.5} is by far the most harmful air pollutant in the Bay

Area Air in terms of the associated impact on public health. A large body of scientific evidence indicates that both long-term and short-term exposure to PM_{2.5} can cause a wide range of health effects (e.g., aggravating asthma and bronchitis, causing visits to the hospital for respiratory and cardiovascular symptoms, and contributing to heart attacks and deaths) (BAAQMD, 2012a).

Table 4.A-1 shows that neither the state nor federal annual standards for PM₁₀ or PM_{2.5} were exceeded between 2013 and 2015.

Nitrogen Dioxide (NO₂)

NO₂ is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO₂. Aside from its contribution to ozone formation, NO₂ can increase the risk of acute and chronic respiratory disease and reduce visibility. NO₂ may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. As shown in Table 4.A-1, neither the state nor federal NO₂ standards were exceeded between 2013 and 2015.

Sulfur Dioxide (SO₂)

SO₂ is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO₂ has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease (BAAQMD, 2012a). As shown in Table 4.A-1, neither the state nor federal SO₂ standards were exceeded between 2013 and 2015.

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses, cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects, which puts children at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California.

Attainment Status

The CARB is required to designate areas of the state as attainment, nonattainment or unclassified for all state standards. An “attainment” designation for an area signifies that the pollutant concentrations did not violate the standard for a pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An “unclassified” designation signifies that data does not support either an attainment or nonattainment status. The California Clean Air Act divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The EPA designates areas for ozone, CO, and NO₂ as either “does not meet the primary standards,” or “cannot be classified,” or “better than national standards.” For SO₂, areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified” or “better than national standards.” **Table 4.A-2** provides a summary of the attainment status for the San Francisco Bay Area Air Basin with respect to federal and state ambient air quality standards.

**TABLE 4.A-2
STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS**

Pollutant	Averaging Time	State SAAQS ^a		Federal NAAQS ^b	
		Standard	Attainment Status	Standard	Attainment Status
Ozone	1 hour	0.09 ppm	N	NA	NA ^c
	8 hour	0.07 ppm	N ^d	0.075 ppm	N
Carbon Monoxide (CO)	1 hour	20 ppm	A	35 ppm	A
	8 hour	9 ppm	A	9 ppm	A
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	A	0.100 ppm	U
	Annual	0.030 ppm	NA	0.053 ppm	A
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	A	0.075	A
	24 hour	0.04 ppm	A	0.14	A
	Annual	NA	NA	0.03 ppm	A
Particulate Matter (PM ₁₀)	24 hour	50 µg/m ³	N	150 µg/m ³	U
	Annual	20 µg/m ³	N ^f	NA	NA
Fine Particulate Matter (PM _{2.5})	24 hour	NA	NA	35 µg/m ³	N ^g
	Annual	12 µg/m ³	N ^f	15 µg/m ³	A
Sulfates	24 hour	25 µg/m ³	A	NA	NA
Lead	30 day	1.5 µg/m ³	A	NA	NA
	Cal. Quarter	NA	NA	1.5 µg/m ³	A
Hydrogen Sulfide	1 hour	0.03 ppm	U	NA	NA
Visibility-Reducing Particles	8 hour	See Note h	U	NA	NA

NOTES:

A = Attainment; N = Nonattainment; U = Unclassified; NA = Not Applicable, no applicable standard; ppm = parts per million; µg/m³ = micrograms per cubic meter.

^a SAAQS = state ambient air quality standards (California). SAAQS for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All other state standards shown are values not to be equaled or exceeded.

^b NAAQS = national ambient air quality standards. NAAQS, other than ozone and particulates, and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The 8-hour ozone standard is attained when the three-year average of the fourth highest daily concentration is 0.08 ppm or less. The 24-hour PM₁₀ standard is attained when the three-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour PM_{2.5} standard is attained when the three-year average of the 98th percentile is less than the standard.

^c The U.S. EPA revoked the national 1-hour ozone standard on June 15, 2005.

^d This state 8-hour ozone standard was approved in April 2005 and became effective in May 2006.

^e State standard = annual geometric mean; national standard = annual arithmetic mean.

^f In June 2002, The California Air Resources Board (CARB) established new annual standards for PM_{2.5} and PM₁₀.

^g U.S. EPA lowered the 24-hour PM_{2.5} standard from 65 µg/m³ to 35 µg/m³ in 2006. EPA designated the Bay Area as nonattainment of the PM_{2.5} standard on October 8, 2009. The effective date of the designation was December 14, 2009 and the Air District had three years to develop a plan, called a State Implementation Plan (SIP), that demonstrates the Bay Area will achieve the revised standard by December 14, 2014. The SIP for the new PM_{2.5} standard must be submitted to the US EPA by December 14, 2012.

^h Statewide visibility reducing particle standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

SOURCE: BAAQMD, 2013a; U.S. EPA, 2016.

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the BAAQMD using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.¹

In addition to monitoring criteria pollutants, both BAAQMD and the CARB operate TAC monitoring networks in the San Francisco Bay Area. Regionally, ambient concentrations of TACs are similar throughout the urbanized areas of the Bay Area Air Basin. The BAAQMD provides two public source inventories of TAC emissions sources within its jurisdiction. The first is its TAC Annual Report, the latest of which was published in 2009. The most recent source is BAAQMD's May 2012 Google Earth-based inventory of stationary source risks and hazards. This latter source indicates three permitted TAC sources within 1,000 feet of the project site boundary. These sources and their BAAQMD-identified cancer risks are presented in **Table 4.A-3**.

TABLE 4.A-3
STATIONARY SOURCES OF TACS WITHIN 1,000 FEET OF THE PROJECT SITE

Name of Source		Address/ Distance from Project	Adjusted Cancer Risk (in one million)	Chronic Health Index ^a (Unit less ratio value)	PM2.5 Concentration (micrograms/ cubic meter)
1	Wind River Systems, Inc.	500 Wind River Way/ 618 feet away	0.996	0.001	0.002
2	City of Alameda Public Works	1616 Fortmann Way/ 988 feet away	0.904	<0.001	<0.001
3	Con Global Industries ^b	1523 Buena Vista/ 1,056 feet away	NA	NA	NA

NOTES:

^a Chronic non-cancer risk is determined by dividing the estimated annual average concentration of a pollutant by the Reference exposure level assigned to that pollutant by the California Office of Environmental Health Hazard Assessment. For one pollutant this ratio is referred to as the Hazard Quotient (HQ). HQs for pollutants targeting the same organ system are added to determine the total Hazard Index (HI).

^b Con Global Industries is no longer in operation. NA = Not Applicable.

SOURCE: BAAQMD, 2012c.

¹ In general, a health risk assessment is required if BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk, then the applicant is subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, calculating the increased risk of cancer as a result of exposure to one or more TACs.

Diesel Particulate Matter

The CARB identified diesel particulate matter (DPM) as a toxic air contaminant in 1998, primarily based on evidence demonstrating cancer effects in humans. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways and rail lines with diesel locomotive operations. The estimated lifetime cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other toxic air pollutant routinely measured in the region. The risk from diesel particulate matter as determined by the CARB declined from 750 in one million in 1990 to 570 in one million in 1995; by 2000, the CARB estimated the average statewide cancer risk from DPM at 540 in one million (CARB, 2009). This calculated cancer risk values from ambient air exposure in the Bay Area can be compared against the lifetime probability of being diagnosed with cancer in the United States, from all causes, which is more than 40 percent (based on a sampling of 17 regions nationwide), or greater than 400,000 in one million, according to the National Cancer Institute (National Cancer Institute, 2012).

Asbestos

Asbestos is also a TAC of concern due to the demolition of buildings and structures as part of the project. Asbestos is a fibrous mineral, which is both naturally occurring in ultramafic rock (a rock type commonly found in California) and used as a processed component of building materials. Because asbestos has been proven to cause serious adverse health effects, including asbestosis and lung cancer, it is strictly regulated based on its natural widespread occurrence and its use as a building material.

Odor Emissions

As described by the BAAQMD in its revised *CEQA Air Quality Guidelines* (BAAQMD, 2012a), odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Odor impacts should be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Generally, increasing the distance between the receptor and the odor source will mitigate odor impacts.

Sensitive Receptors

Air quality does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, those with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases. Land uses such as schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times are generally far shorter in parks and playgrounds than in residential locations and schools, which typically reduces overall exposure to pollutants. Residential areas are considered more sensitive to air quality conditions compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions.²

BAAQMD defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, colleges and universities, daycares, hospitals, and senior-care facilities. Workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration (OSHA) to ensure the health and well-being of their employees (BAAQMD, 2012b).

Sensitive receptors in the vicinity of the project include residences along Buena Vista Avenue (nearest approximately 365 feet south of the project), along Ohlone Street (nearest approximately 770 feet east of the project), and along Sherman Street (nearest approximately 950 feet west of the project). Other existing receptors include Littlejohn Park (about 450 feet southwest of the project) and the Marina Shores residential subdivision (about 50 feet southeast of the project area).

A.3 Air Quality Regulatory Framework

Development within the project site boundaries must comply with federal, state, regional, and local regulations. This section discusses these requirements to the extent that they will affect the way development occurs with the proposed project.

Federal

Criteria Pollutants

The 1970 CAA (last amended in 1990) required that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled in order to achieve all standards by the deadlines specified in the CAA. These ambient air quality standards are intended to protect the public

² The factors responsible for variation in exposure are also often similar to factors associated with greater susceptibility to air quality health effects. For example, poorer residents may be more likely to live in crowded substandard housing and be more likely to live near industrial or roadway sources of air pollution.

health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed.

The current attainment status for the SFBAAB, with respect to federal standards, is summarized in Table 4.A-2. In general, the SFBAAB experiences low concentrations of most pollutants when compared to federal standards, except for ozone and particulate matter, for which standards are exceeded periodically.

Toxic Air Contaminants

TACs are regulated under both state and federal laws. Federal laws use the term “Hazardous Air Pollutants” (HAPs) to refer to the same types of compounds that are referred to as TACs under State law. Both terms encompass essentially the same compounds. The 1977 Clean Air Act Amendments (CAAA) required the U.S. EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. These substances include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 CAAA, 189 substances are regulated as HAPs.

State

Criteria Pollutants

Although the CAA established national ambient air quality standards, individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorology in California, there is considerable diversity between the state and national ambient air quality standards, as shown in Table 4.A-2. California ambient standards tend to be at least as protective as national ambient standards and are often more stringent.

In 1988, California passed the California Clean Air Act (CCAA) (California Health and Safety Code Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment, but based on state ambient air quality standards rather than the federal standards. As indicated in Table 4.A-2, the SFBAAB is designated as “nonattainment” for state ozone, PM10, and PM2.5 standards. The Bay Area Air Basin is designated as “attainment” or “unclassified” for all other pollutants listed in the table.

The CCAA requires each air district in which state air quality standards are exceeded to prepare a plan that documents reasonable progress towards attainment. A 3-year update is required. In the Bay Area, this planning process is incorporated into its Clean Air Plan.

Toxic Air Contaminants

The Health and Safety Code defines TACs as air pollutants 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. The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). A total of 243 substances have been designated TACs under California law; they include the 189 (federal) HAPs adopted in accordance with AB 2728. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings.

In 2000, the CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. The regulation is anticipated to result in an 80 percent decrease in statewide diesel health risk in 2020 as compared with the diesel risk in 2000. Additional regulations apply to new trucks and to diesel fuel. Subsequent regulation of diesel emission by the CARB include the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Offroad Diesel Vehicle Regulation and the New Offroad Compression Ignition Diesel Engines and Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel powered equipment.

Despite these reduction efforts, the CARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses. In April 2005, the CARB published *Air Quality and Land Use Handbook: a Community Health Perspective*. This handbook is intended to give guidance to local governments in the siting of sensitive land uses near sources of air pollution. Recent studies have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities such as ports, rail yards and distribution centers. Specifically, the document focuses on risks from emissions of DPM, a known carcinogen, and establishes recommended siting distances of sensitive receptors. With respect to Port facilities, the recommendations of the report are: “Avoid siting new sensitive land uses immediately downwind of ports in the most heavily impacted zones.” With respect to freeways, the recommendations of the report are: “Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with more than 100,000 vehicles per day or rural roads with 50,000 vehicles/day”. The CARB notes that these recommendations are advisory and should not be interpreted as defined “buffer zones,” and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary the CARB’s position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level (CARB, 2005).

Regional

BAAQMD is the regional agency responsible for air quality regulation within the San Francisco Bay Area Air Basin. BAAQMD regulates air quality through its planning and review activities. BAAQMD has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, and can impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. BAAQMD regulates new or expanding stationary sources of toxic air contaminants.

For state air quality planning purposes, the Bay Area is classified as a serious non-attainment area for ozone. The “serious” classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the BAAQMD adopt a Clean Air Plan, which is a comprehensive plan to improve Bay Area air quality and protect public health. The BAAQMD must also update the Clean Air Plan every three years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The Bay Area’s record of progress in implementing previous measures must also be reviewed. On September 15, 2010, BAAQMD adopted the most recent revision to the Clean Air Plan (BAAQMD, 2010a).³ The three primary goals of the *2010 Clean Air Plan* are to:

- Attain air quality standards;
- Reduce population exposure and protect public health in the Bay Area; and
- Reduce greenhouse gas emissions and protect the climate.

In furtherance of these goals, the *2010 Clean Air Plan* is designed to update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the CCAA to implement “all feasible measures” to reduce ozone; consider the impacts of ozone control measures on PM10 and PM2.5, TACs, and GHGs, in a single, integrated plan; review progress in improving air quality in recent years; and establish emission control measures to be adopted or implemented in the 2009–2012 timeframe. The *2010 Clean Air Plan* provides a roadmap showing how the San Francisco Bay Area will achieve compliance with the state 1-hour ozone standard as expeditiously as practicable, and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The control strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the MTC, local governments, transit agencies, and others.

Local

City of Alameda General Plan

The City of Alameda General Plan (City of Alameda, 1991) is the principal policy document for guiding future conservation and development within the City. It represents the framework on

³ BAAQMD is currently in the process of updating the 2010 Clean Air Plan, with adoption of the 2017 Clean Air Plan anticipated by the end of 2017.

which the City must base decisions regarding growth, public services and facilities, and protection and enhancement of the community).

The General Plan establishes comprehensive, long-term land use policies for the City. Consistent with state law, the General Plan includes the Land Use Element; City Design Element; Transportation Element; Open Space and Conservation Element; Parks and Recreation, Shoreline Access, Schools and Cultural Facilities Element; Airport Environs Element (relates to Metropolitan Oakland International Airport); Health and Safety Element; and Housing Element; along with specific elements pertaining to the Northern Waterfront.

The applicable policies relating to air quality and climate change are listed below.

Guiding Policies:

- Strive to meet all Federal and State standards for ambient air quality. *(Policy 5.5.a)*
- Support continued monitoring efforts by the Bay Area Air Quality Management District. *(Policy 5.5.b)*

Implementing Policies:

- Encourage use of public transit for all types of trips. *(Policy 5.5.c)*
- Encourage development and implementation of Transportation System Management (TSM) programs. *(Policy 5.5.d)*
- Minimize commuting by balancing jobs and nearby housing opportunities. *(Policy 5.5.e)*

A.4 Climate Change Environmental Setting

“Global warming” and “global climate change” are the terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal (IPCC, 2007), with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing greenhouse gas (GHG) concentrations resulting from human activity such as fossil fuel burning and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth’s atmosphere are thought to be the main cause of human-induced climate change. GHGs naturally trap heat by impeding the exit of solar radiation

that has hit the earth and is reflected back into space. Some GHGs occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) are the principal GHGs. When concentrations of these gases exceed natural concentrations in the atmosphere, the greenhouse effect may be enhanced. CO₂, CH₄, and N₂O occur naturally, and are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing⁴ associated with agricultural practices and landfills. Other human-generated GHGs, which have much higher heat-absorption potential than CO₂, include fluorinated gases such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆), which are byproducts of certain industrial processes.

CO₂ is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. CH₄ and N₂O are substantially more potent GHGs than CO₂, with GWPs of 21 and 310 times that of CO₂, respectively.

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons of CO₂ equivalents (CO₂e). CO₂e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO₂e, both from residential developments and human activity in general.

Potential Effects of Human Activity on GHG Emissions

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂ emissions (and thus substantial increases in atmospheric concentrations). In 1994, atmospheric CO₂ concentrations were found to have increased by nearly 30 percent above pre-industrial (c. 1860) concentrations.

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include the displacement of thousands of coastal businesses and residences, impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity. As the CARB *Climate Change Scoping Plan* noted, the legislature in enacting Assembly Bill (AB) 32 found that global warming would cause detrimental effects to some of the state's largest industries, including agriculture, winemaking, tourism, skiing, commercial and recreational fishing, forestry,

⁴ Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

and the adequacy of electrical power generation. The *Climate Change Scoping Plan* states as follows (CARB, 2008): “The impacts of global warming are already being felt in California. The Sierra snowpack, an important source of water supply for the state, has shrunk 10 percent in the last 100 years. It is expected to continue to decrease by as much as 25 percent by 2050. World-wide changes are causing sea levels to rise – about 8 inches of increase has been recorded at the Golden Gate Bridge over the past 100 years – threatening low coastal areas with inundation and serious damage from storms.”

Impacts of Climate Change

Ecosystem and Biodiversity Impacts

Climate change is expected to have effects on diverse types of ecosystems, from alpine to deep-sea habitat (U.S. EPA, 2008a). As temperatures and precipitation change, seasonal shifts in vegetation would occur; this could affect the distribution of associated flora and fauna species. As the range of species shifts, habitat fragmentation could occur, with acute impacts on the distribution of certain sensitive species. The IPCC states that “20 percent to 30 percent of species assessed may be at risk of extinction from climate change impacts within this century if global mean temperatures exceed 2 to 3°C (3.6 to 5.4°F) relative to pre-industrial levels” (IPCC, 2007). Shifts in existing biomes could also make ecosystems vulnerable to encroachment by invasive species. Wildfires, which are an important control mechanism in many ecosystems, may become more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. In general terms, climate change is expected to put a number of stressors on ecosystems, with potentially catastrophic effects on biodiversity.

Human Health Impacts

Climate change may increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects such as malaria, dengue fever, yellow fever, and encephalitis (U.S. EPA, 2008b). Cholera, which is associated with algal blooms, could also increase. While these health impacts would largely affect tropical areas in other parts of the world, effects would also be felt in California. Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more frequency and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply more vulnerable.

Greenhouse Gas Emissions Estimates

Global Emissions

Worldwide emissions of GHGs in 2004 were 30 billion tons of CO₂e per year (UNFCCC, 2012). This includes both ongoing emissions from industrial and agricultural sources, but excludes emissions from land use changes.

U.S. Emissions

In 2009, the United States emitted about 6.7 billion metric tons of CO₂e or about 21 metric tons per year per person. Of the four major sectors nationwide — residential, commercial, industrial, and transportation — transportation accounts for the highest fraction of GHG emissions (approximately 33 percent); these emissions are entirely generated from direct fossil fuel combustion (U.S. EPA, 2011).

State of California Emissions

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CARB, 2013b). Emissions of CO₂ are byproducts of fossil fuel combustion. Methane, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Nitrous oxide is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution, respectively, are two of the most common processes of CO₂ sequestration. California produced approximately 452 million gross metric tons of CO₂e in 2010 (CARB, 2013b). Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2010, accounting for 38 percent of total GHG emissions in the state. This sector was followed by the electric power sector (including both in-state and out-of-state sources) (21 percent) and the industrial sector (19 percent) (CARB, 2013b).

Bay Area Emissions

In the San Francisco Bay Area, the transportation sector and industrial/commercial sector represent the largest sources of GHG emissions, accounting for 36.4 percent each of the Bay Area's 95.8 million metric tons of CO₂e in 2007. Electricity/co-generation sources account for about 15.9 percent of the Bay Area's GHG emissions, followed by residential fuel usage at about 7.1 percent. Off-road equipment and agricultural/farming sources currently account for approximately three percent and 1.2 percent of the total Bay Area GHG emissions, respectively (BAAQMD, 2010b).

City of Alameda GHG Emissions and Local Action Plan for Climate Protection

On February 5, 2008, the City of Alameda's City Council adopted the City of Alameda's Local Action Plan for Climate Protection (LAPCP) (City of Alameda, 2008). Important findings of the Plan include the following:

- The City of Alameda's greenhouse gas emissions baseline inventory reveals that Alameda generated approximately 303,097 tons of CO₂e in 2005;
- The City of Alameda is expected to increase its annual GHG emissions to 329,867 tons of CO₂e by 2020 based on a 0.65 percent annual population growth rate;
- Transportation based GHG emissions account for 54 percent of the City's GHG emissions, while 29 percent is from energy and heating demands of residential uses and 17 percent from commercial uses.

- Although the City sent approximately 59,024 tons of solid waste to landfills in 2005, because of the aggressive recycling efforts and efficient methane recovery capture of landfills which serve the City, the net GHG emissions from solid waste disposal are less than zero, and are therefore not considered as a contributor to the GHG emission baseline and are zeroed out for inventory purposes.

A.5 Climate Change Regulatory Framework

Federal

U.S. Environmental Protection Agency “Endangerment” and “Cause or Contribute” Findings

The U.S. Supreme Court held that the United States Environmental Protection Agency (U.S. EPA) must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency* et al., 12 states and cities, including California, together with several environmental organizations, sued to require the U.S. EPA to regulate GHGs as pollutants under the CAA (127 S. Ct. 1438 (2007)). The Supreme Court ruled that GHGs fit within the CAA’s definition of a pollutant and the U.S. EPA had the authority to regulate GHGs.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- ***Endangerment Finding:*** The current and projected concentrations of the six key well-mixed GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations.
- ***Cause or Contribute Finding:*** The combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the U.S. EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year (FY) 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required the U.S. EPA to develop “...mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy...” The Reporting Rule applies to most entities that emit 25,000 metric tons of CO₂e or more per year. Starting in 2010, facility owners are required to submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also mandates recordkeeping and administrative requirements in order for the U.S. EPA to verify annual GHG emissions reports.

State

The legal framework for GHG emission reduction has come about through Executive Orders, legislation, and regulation. The major components of California’s climate change initiative are reviewed below.

California Environmental Quality Act and Senate Bill 97

CEQA requires lead agencies to consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. GHG emissions have the potential to adversely affect the environment because they contribute to global climate change. In turn, global climate change has the potential to raise sea levels, affect rainfall and snowfall, and affect habitat.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The California Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted the state CEQA Guidelines amendments, as required by SB 97. These state CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

CEQA Guidelines

CEQA *Guidelines*, Section 15064.4 specifically addresses the significance of GHG emissions. Section 15064.4 calls for a lead agency to make a "good-faith effort" to "describe, calculate or estimate" GHG emissions in CEQA environmental documents. Section 15064.4 further states that the analysis of GHG impacts should include consideration of (1) the extent to which the project may increase or reduce GHG emissions, (2) whether the project emissions would exceed a locally applicable threshold of significance, and (3) the extent to which the project would comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions." The revisions also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of greenhouse gas emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (CEQA Guidelines Section 15064(h)(3).) The CEQA *Guidelines* revisions do not, however, set a numerical threshold of significance for GHG emissions.

The revisions also include the following guidance on measures to mitigate GHG emissions, when such emissions are found to be significant:

Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;

- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester greenhouse gases; and
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

(CEQA Guidelines Section 15126.4(a).)

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493, which required CARB to develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state.”

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004, adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1), require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight [GVW] rating of less than 10,000 pounds and that is designed primarily for the transportation of persons), beginning with model year 2009. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for model year 2016 are approximately 37 percent lower than the limits for the first year of the regulations, model year 2009. For light-duty trucks with an LVW of 3,751 pounds to a GVW of 8,500 pounds, as well as for medium-duty passenger vehicles, GHG emissions will be reduced approximately 24 percent between 2009 and 2016.

Because the Pavley standards (named for the bill's author, state Senator Fran Pavley) would impose stricter standards than those under the CAA, California applied to the U.S. EPA for a waiver under the CAA; this waiver was initially denied in 2008. In 2009, however, the U.S. EPA granted the waiver.

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, then-Governor Arnold Schwarzenegger established Executive Order S-3-05, which sets forth the following target dates by which statewide GHG emissions would be progressively reduced: by

2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32 and the California Climate Change Scoping Plan

Assembly Bill 32 Requirements

In 2006, the California legislature passed Assembly Bill 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires the CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. The CARB has identified a GHG reduction target of 15 percent from current levels for local governments themselves and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.

Scoping Plan Provisions

Pursuant to AB 32, the CARB adopted a *Climate Change Scoping Plan* in December 2008 (re-approved by the CARB on August 24, 2011 [CARB, 2008]) outlining measures to meet the 2020 GHG reduction goals. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures that are worth studying further, and that the State of California may implement, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO₂e (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and other sources could be achieved should the state implement all of the measures in the Scoping Plan. The Scoping Plan relies on the requirements of Senate Bill (SB) 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

Cap-and-Trade Program

The Scoping Plan identifies cap-and-trade as a key strategy for helping California reduce its GHG emissions (CARB, 2008). A cap-and-trade program sets the total amount of greenhouse gas emissions allowable for facilities under the cap and allows covered sources, including producers and consumers of energy, to determine the least expensive strategies to comply. AB 32 required the CARB to adopt the cap-and-trade regulation by January 1, 2011, and the program itself began in November 2012.

Carbon offset credits are created through the development of projects, such as renewable energy generation or carbon sequestration projects, that achieve the reduction of emissions from activities not otherwise regulated, covered under an emissions cap, or resulting from government incentives. Offsets are verified reductions of emissions whose ownership can be transferred to others. As required by AB 32, any reduction of GHG emissions used for compliance purposes must be real, permanent, quantifiable, verifiable, enforceable, and additional. Offsets used to meet

regulatory requirements must be quantified according to CARB-adopted methodologies, and the CARB must adopt a regulation to verify and enforce the reductions. The criteria developed will ensure that the reductions are quantified accurately and are not double-counted within the system (CARB, 2008).

Executive Order S-1-07

Executive Order S-1-07, signed by then-Governor Arnold Schwarzenegger in 2007, proclaimed that the transportation sector is the main source of GHG emissions in California, at over 40 percent of statewide emissions. The order established a goal of reducing the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020. It also directed the CARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete, early-action measure after meeting the mandates in AB 32. The CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Senate Bills 1078 and 107 and Executive Orders S-14-08 and S-21-09

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the CARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020.

The 33-percent-by-2020 goal was codified in April 2011 with Senate Bill X1-2, which was signed by Governor Edmund G. Brown, Jr. This new Renewable Portfolio Standard preempts the CARB 33 percent Renewable Electricity Standard and applies to all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must adopt the new Renewable Portfolio Standard goals of 20 percent of retail sales from renewables by the end of 2013 and 25 percent by the end of 2016, with the 33 percent requirement being met by the end of 2020.

Senate Bill 1368

SB 1368 is the companion bill of AB 32 and was signed by then-Governor Schwarzenegger in September 2006. SB 1368 requires the California Public Utilities Commission (CPUC) to establish a GHG emission performance standard for baseload generation from investor-owned utilities by February 1, 2007. The California Energy Commission (CEC) was also required to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

Senate Bill 375

In addition to policy directly guided by AB 32, the legislature in 2008 passed SB 375, which provides for regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 aligns regional transportation planning efforts, regional GHG emissions reduction targets, and land use and housing allocations. SB 375 requires Regional Transportation Plans (RTPs) developed by the state's 18 metropolitan planning organizations (MPOs) to incorporate a "sustainable communities strategy" (SCS) that will achieve GHG emission reduction targets set by the CARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects, such as transit-oriented development. SB 375 would be implemented over the next several years. Plan Bay Area, the San Francisco Bay Area's SCS, was adopted in July 2013.

Local

Local Action Plan for Climate Protection

The LAPCP (City of Alameda, 2008) contains multiple initiatives to help Alameda achieve its overall goal of reducing community-wide emissions by 25 percent below 2005 levels by 2020. The Plan identifies the following initiatives that may apply to the proposed project:

Transportation Initiative 1: Require that all new major developments' short and long-term transportation emissions are reduced by 10 percent. Examples of strategies to achieve this reduction include transportation demand management strategies and implementation of a Bike Plan, or bicycle facilities.

Energy Initiative 4: Amend the Alameda Municipal Code to include sustainable design and green building standards for all new, substantially expanded and remodeled buildings. Although this Initiative directs the City to adopt green building standards, it provides examples of recent projects of varying sizes which have achieved a Leadership in Energy and Environmental Design (LEED) rating of silver or higher.

Energy Initiative 6: Develop a wood-burning prohibition ordinance to reduce air pollution for new residential construction. Again, while this Initiative directs the City to adopt an ordinance, its intent is to discourage new development from installing wood-burning fireplaces.

Waste and Recycling Initiative 1: Adopt "Zero Waste Strategy" Programs and Ordinances. This Initiative identifies increased sorting and recycling of construction and demolition materials as an element of GHG reduction.

A.6 Impacts and Mitigation Measures

This analysis evaluates the proposed project's impacts related to air quality and climate change. The evaluation considered project plans, current Appendix G significance conditions at the project site, and applicable regulations and guidelines.

Significance Criteria

In accordance with Appendix G of the state CEQA Guidelines, the impact of the proposed project on air quality would be considered significant if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively significant net increase of any nonattainment pollutant;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

The BAAQMD has further defined these criteria of significance to indicate the project would result in a significant air quality impact if it would:

- Violate the Bay Area Air Quality Management District's air quality standards or contribute substantially to an existing or projected air quality violation by:
 - Generating average daily criteria air pollutant emissions of ROG, NO_x or PM_{2.5} exhaust emissions in excess of 54 pounds per day or PM₁₀ exhaust emissions of 82 pounds per day during project construction;
 - For project operations, generating average daily criteria air pollutant emissions of ROG, NO_x, or PM_{2.5} in excess of 54 pounds per day, or maximum annual emissions of 10 tons per year. For emissions of PM₁₀, generating average daily emissions of 82 pounds per day or 15 tons per year; or
 - Contributing to CO concentrations exceeding the State ambient air quality standards of 9 ppm averaged over 8 hours and 20 ppm for 1-hour for project operations.
- Expose sensitive receptors (including residential areas) or the general public to toxic air contaminants in excess of the following thresholds:
 - An excess cancer risk level of more than 10 in one million, or non-cancer (i.e., chronic or acute) risk greater than 1.0 hazard index from a single source;
 - An incremental increase of greater than 0.3 µg /m³ annual average PM_{2.5} from a single source;
 - An excess cancer risk level of more than 100 in one million, or non-cancer risk greater than 100 in one million from all sources; or
 - An incremental increase of greater than 0.8 µg /m³ annual average PM_{2.5} from all sources.

BAAQMD's recommended approach to addressing localized construction dust-related air quality impacts (fugitive PM₁₀ dust emissions) is a Best Management Practices (BMP) approach. This approach is identified both in the BAAQMD CEQA Guidelines, as well as in the 2009 Justification Report. If BAAQMD-recommended BMPs, which are tiered based on the size of the construction site (less than or greater than four acres), are incorporated into the project, then localized fugitive dust would be less-than-significant during construction.

Project-related construction emissions would be considered to result in a cumulatively considerable net increase of a criteria pollutant and have a significant air quality impact if average daily construction-related emissions would exceed 54 pounds of ROG, NO_x, or PM_{2.5} (non-inclusive of fugitive dust⁵) or exceed 82 pounds of PM₁₀ (exclusive of fugitive dust⁶). The thresholds for PM₁₀ and PM_{2.5} are inclusive only of construction exhaust emissions. BAAQMD guidance regarding construction-related emission of fugitive dust identifies implementation of BMPs as its threshold of significance (as discussed above).

The BAAQMD thresholds state that a project would have a significant air quality impact if construction activities would result in an incremental increase in localized annual average concentrations of PM_{2.5} exceeding 0.3 µg/m³ within a 1,000-foot radius from the property line of the construction area or a receptor. A project would also have a significant air quality impact if it would expose persons to substantial levels of TACs (including DPM), such that the probability of contracting cancer for the MEI exceeds 10 in one million or if it would expose persons to TACs such that a non-cancer Hazard Index of 1.0 would be exceeded. A Hazard Index is a summation of the non-cancer hazard quotients for all chemicals to which an individual is exposed.

For project-level impact operational analyses, the BAAQMD 2009 Justification Report identifies various thresholds and tests of significance. For ROG, NO_x and PM_{2.5}, a net increase equal to or greater than 10 tons per year (maximum annual) or 54 pounds average daily emissions is considered significant, while for PM₁₀ a net increase equal to or greater than 15 tons per year (maximum annual) or 82 pounds average daily emissions is considered significant.

In regards to CO, a project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

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

Under the thresholds identified in the BAAQMD Justification Report, a project would have a significant air quality impact if it would result in an incremental increase in localized annual average concentrations of PM_{2.5} exceeding 0.3 micrograms per cubic meter from project operations. A project would also have a significant air quality impact if project operations would expose persons to substantial levels of TACs, such that the probability of contracting cancer for

⁵ Fugitive dust consists of very small liquid and solid particulate matter that is suspended in the air by the wind and human activities. Fugitive dust originates primarily from the soil.

⁶ Fugitive dust is PM suspended in the air by the wind and human activities. It originates primarily from the soil and is not emitted from exhaust pipes, vents, or stacks.

the MEI exceeds 10 in one million or if it would expose persons to TACs such that exposure levels exceed a non-cancer Hazard Index of 1.0.

The emission thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

The State CEQA Guidelines indicate that a project would have a significant adverse greenhouse gas emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The BAAQMD has further defined these criteria of significance to indicate the project would result in a less-than-significant air quality impact if it would:

- Result in operational-related greenhouse gas emissions of less than 1,100 metric tons of CO₂e a year; or
- Result in operational-related greenhouse gas emissions of less than 4.6 metric tons of CO₂e per service population (residents plus employees).

Additional information on the applicability of these thresholds to the proposed project, as well as the methodology used for determining the potential impacts of the project is provided below.

Impact Assessment Methodology

Criteria Pollutants

Project-related air quality impacts fall into two categories: short-term impacts due to construction, and long-term impacts due to project operation. First, during project construction (short-term), the project would affect local particulate concentrations primarily due to fugitive dust sources and diesel exhaust. Under operations (long-term), the project would result in an increase in emissions primarily due to motor vehicle trips and on-site stationary sources such as boilers for natural gas combustion for space and water heating. Other sources include minor area sources such as landscaping and use of consumer products.

Construction emissions were estimated using the current version of the California Emissions Estimator Model (CalEEMod). This model was also used to calculate the effectiveness of proposed mitigation measures. Operational phase emissions were also estimated using CalEEMod and incorporate the trip generation figures developed by Abrams Associates for the proposed project.

Localized carbon monoxide "hot spot" analysis was undertaken using the CALINE-4 model and the results compared to state ambient air quality standards.

Greenhouse Gases

Separate thresholds of significance are established for operational emissions from stationary sources (such as generators, furnaces, and boilers) and non-stationary sources (such as on-road vehicles). The threshold for stationary sources is 10,000 metric tons of CO₂e per year (i.e., emissions above this level may be considered significant). For non-stationary sources, three separate thresholds have been established:

- Compliance with a Qualified Greenhouse Gas Reduction Strategy (i.e., if a project is found to be out of compliance with a Qualified Greenhouse Gas Reduction Strategy, its GHG emissions may be considered significant); or
- 1,100 metric tons of CO₂e per year (i.e., emissions above this level may be considered significant); or
- 4.6 metric tons of CO₂e per service population per year (i.e., emissions above this level may be considered significant). (Service population is the sum of residents plus employees expected for a development project.)

For quantifying a project's GHG emissions, BAAQMD recommends that all GHG emissions from a project be estimated, including a project's direct and indirect GHG emissions from operations. Direct emissions refer to emissions produced from onsite combustion of energy, such as natural gas used in furnaces and boilers, emissions from industrial processes, and fuel combustion from mobile sources. Indirect emissions are emissions produced offsite from energy production and water conveyance due to a project's energy use and water consumption. BAAQMD has provided guidance on detailed methods for modeling GHG emissions from proposed projects.

This analysis uses both a quantitative and a qualitative approach. The quantitative approach is used to address the first significance criterion, to determine whether the project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. This analysis considers that, because the quantifiable thresholds developed by BAAQMD in its 2009 Justification Report were formulated based on AB 32 and California Climate Change Scoping Plan reduction targets for which its set of strategies were developed to reduce GHG emissions statewide, a project cannot exceed the numeric BAAQMD efficiency threshold of 4.6 metric tons of CO₂e per service population annually without also conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs (such as the state Climate Change Scoping Plan). Therefore, if a project exceeds the numeric threshold and thereby results in a significant cumulative impact, it would also result in a significant cumulative impact with respect to plan, policy, or regulation consistency, even though the project may incorporate measures and have features that would reduce its contribution to cumulative GHG emissions.

GHG emissions resulting from the project were estimated using CalEEMod version 2013.2, with model data and assumptions included in Appendix D. Construction emissions were estimated for equipment and truck exhaust and construction worker vehicles. In regards to operations, vehicle trips assumed default trip lengths for urban land uses, which are embedded in CalEEMod. The model makes adjustments for implementation of Pavley vehicle standards and Low Carbon Fuel Standards. Area and indirect sources associated with project operations would primarily result from electrical usage, water and wastewater transport (the energy used to pump water and

wastewater to and from the project) and solid waste generation. GHG emissions from electrical usage are generated when energy consumed on the site is generated by fuel combustion. GHG emissions from water and wastewater transport are also indirect emissions resulting from the energy required to transport water from its source, and the energy required to treat wastewater and transport it to its treated discharge point. Solid waste emissions are generated when the increased waste generated by the project are taken to a landfill to decompose.

Cumulative Impacts (Criteria Pollutants, TACs, and GHGs)

The BAAQMD Justification Report states that if the individual emissions of a project results in an increase in ROG, NO_x, PM_{2.5}, or PM₁₀ exceeding the project-level significance criteria, then it would also be considered to contribute considerably to a significant cumulative effect.

With regard to cumulative impacts from PM_{2.5}, a significant cumulative air quality impact would be considered to occur if localized annual average concentrations of PM_{2.5} would exceed 0.8 micrograms per cubic meter at any receptor from project operations in addition to existing emission sources and cumulative emissions sources within a 1,000-foot radius of the property line of the source or receptor.

With regard to cumulative impacts from TACs, a significant cumulative air quality impact would be considered to occur if the probability of contracting cancer for the MEI would exceed 100 in one million or if the project would expose persons to TACs such that a non-cancer chronic Hazard Index of 10.0 would be exceeded at any receptor as a result of project operations, in addition to existing emission sources and cumulative emissions sources within a 1,000 foot radius of the project site. However, a project's construction or operational impacts would be considered to result in a considerable contribution to an identified cumulative health risk impact if the project's construction or operation activities would exceed the project-level health risk significance thresholds identified above.

With regard to impacts from GHGs, both BAAQMD and the California Air Pollution Control Officers Association (CAPCOA) consider GHG impacts to be exclusively cumulative impacts (BAAQMD, 2012; CAPCOA, 2008); as such, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere. The quantitative efficiency threshold proposed by BAAQMD in its 2009 Justification Report is 4.6 metric tons of CO₂e per service population annually. If the project construction and operational GHG emissions would exceed this threshold then, consistent with BAAQMD Guidelines, it would be considered to have a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact on climate change.

Northern Waterfront GPA EIR

The GPA EIR concluded that the Northern Waterfront GPA would result in less-than-significant operational impacts associated with odors, air toxics, consistency with the applicable air quality plan, and carbon monoxide concentrations. Because the GPA EIR was a programmatic analysis, projects proposed within the Northern Waterfront GPA are subject to a project-level review for air quality impacts, which is included below. Also, the currently proposed project varies somewhat

from what was projected to occur on the project site in the Northern Waterfront GPA EIR. Therefore, a revised analysis of the currently proposed project is included below. **Mitigation Measure AIR-1a**, related to construction, would apply to the proposed project, and is modified to address current construction practices as further discussed below. In addition, several new measures have been identified in order to ensure project impacts would be less-than-significant, including **Mitigation Measure AIR-2**, which would prohibit wood burning stoves and fireplaces in residential units, and **Mitigation Measure AIR-3**, which would require diesel particulate filters to be incorporated during construction in order to reduce potential diesel exposure of nearby sensitive residential receptors.

GHGs were not analyzed in the GPA EIR and were not commonly analyzed in CEQA documents at the time the GPA EIR was prepared and adopted. Information about GHGs could not have been known with the exercise of reasonable diligence at the time the GPA was adopted. Therefore, supplemental evaluation is provided below to consider the project's effects with respect to GHG emissions. The following analysis was developed from information contained in the updated construction and operational analysis included in the Encinal Terminals Air Quality Impact Analysis report, attached to this EIR as Appendix D.

Impact Analysis

Impact 4.A-1: The proposed project would not result in localized construction dust-related air quality impacts; generate construction emissions that would result in a substantial increase of criteria pollutants and precursors for which the air basin is in nonattainment under an applicable federal or state ambient air quality standard; or expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM_{2.5}). (Less than Significant with Mitigation)

As described in Chapter 3, *Project Description*, the proposed project includes demolition of existing structures as part of the redevelopment of the project site and the construction of the new structures. Project related demolition, grading and other construction activities at the project site may cause wind-blown dust that could emit particulate matter into the atmosphere. Fugitive dust includes not only PM₁₀ and PM_{2.5} but also larger particles as well that can represent a nuisance impact. Dust can be an irritant and cause watering eyes or irritation to the lungs, nose and throat. Demolition, excavation and other construction activities can cause wind-blown dust to add to particulate matter in the local atmosphere. Although there are federal standards for air pollutants and state and regional air quality control plans, air pollutants continue to have impacts on human health. California EPA has found that particulate matter exposure can cause health effects at levels lower than national standards. The current health burden of particulate matter demands that, where possible, public agencies take feasible actions to reduce sources of particulate matter exposure.

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter (PM_{2.5} and PM₁₀), and TACs such as diesel exhaust particulate matter. Site preparation and project construction would involve grading, paving and building activities. Construction-related effects on air quality from the proposed project would be greatest during the

site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction sites. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

For mitigation of fugitive dust emissions, the BAAQMD recommends implementing best management practices (BMPs), as a pragmatic and effective approach to controlling fugitive dust emissions (BAAQMD, 2009). BAAQMD notes that individual measures have been shown to reduce fugitive dust by anywhere from 30 percent to more than 90 percent. Therefore, implementation of these BMPs would ensure the project's fugitive dust emissions remained below a level of significance. These BMPs are included as **Mitigation Measure 4.A-1**, which would ensure the project's impact would be less than significant with mitigation.

In addition to dust-related PM₁₀ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, VOCs and some soot particulate (PM_{2.5} and PM₁₀) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Precise details of construction activities are unknown at this time; therefore, default assumptions (e.g., construction fleet activities and duration) from CalEEMod were assumed. For purposes of this analysis the construction schedule for all improvements was assumed to be approximately 46 months (or approximately 840 construction days). Construction emissions were estimated for the project using CalEEMod, consistent with BAAQMD recommendations. Construction-related emissions are presented in **Table 4.A-4** and additional information is provided in Appendix D. CalEEMod output sheets are also included in Appendix D.

TABLE 4.A-4
AVERAGE ANNUAL DAILY CONSTRUCTION-RELATED POLLUTANT EMISSIONS (pounds/day)^a

Scenario	ROG	CO	NO _x	Exhaust PM _{2.5} ^b	Fugitive Dust PM _{2.5} ^b	Total PM _{2.5} ^b	Exhaust PM ₁₀ ^b	Fugitive Dust PM ₁₀ ^b	Total PM ₁₀ ^b
Average Daily Emissions	29.7	49.5	38.3	1.8	1.8	3.6	1.9	5.5	7.4
BAAQMD Threshold	54.0	NA	54.0	54.0	BMP	NA	82.0	BMP	NA
Significant Impact?	No	NA	No	No	NA	NA	No	NA	NA

NA: Not Applicable, the BAAQMD does not have thresholds.

BMP: Best Management Practices.

^a Emissions include results modeled with CalEEMod. Additional data and assumptions are described in Appendix D.

^b BAAQMD's construction-related significance thresholds for PM₁₀ and PM_{2.5} apply to exhaust emissions only and not to fugitive dust.

SOURCE: LSA Associates, Inc., 2016.

As shown in Table 4.A-4, construction emissions associated with the project would be less than significant for ROG, NO_x and PM_{2.5} and PM₁₀ exhaust emissions. The BAAQMD requires implementation of Best Management Practices to reduce construction dust impacts to a less than-significant level. Implementation of GPA EIR **Mitigation Measure AIR-1a** (and modified to reflect the latest BAAQMD recommendations), would reduce impacts to less than significant levels. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

GPA EIR Mitigation Measure AIR-1a (revised): Implementation of Dust Abatement Programs. ~~Proponents of development projects within the Northern Waterfront GPA area~~
The project applicant shall be required to demonstrate compliance with all applicable City regulations and operating procedures prior to issuance of building or grading permits, including standard dust control measures. The effective implementation of dust abatement programs, incorporating all of the following dust control measures, would reduce the temporary air quality impact associated with construction dust.

- All active construction areas shall be watered two times daily using equipment and staff provided by the project applicant or prime contractor, as needed, to avoid visible dust plumes. Appropriate non-toxic dust palliative or suppressant, added to water before application, may be used.
- All trucks hauling soil, sand and other loose materials shall be covered ~~or shall maintain at least two feet of freeboard.~~
- All unpaved access roads, parking areas and construction staging areas shall be either paved, watered as necessary to avoid visible dust plumes, or subject to the application of (non-toxic) soil stabilizers.
- All paved access roads, parking areas and staging areas at the construction site shall be swept daily with water sweepers. The use of dry power sweeping is prohibited.
- If visible soil material is carried onto adjacent public streets, these streets shall be swept daily with water sweepers. The use of dry power sweeping is prohibited.
- All stockpiles of debris, soil, sand or other materials that can be blown by the wind shall either be covered or watered as necessary to avoid visible dust plumes.
- An off-pavement speed limit of 15 miles per hour for all construction vehicles shall be incorporated into the construction contract and enforced by the prime contractor.
- All inactive portions of the project site (those areas which have been previously graded, but inactive for a period of ten days or more) shall be watered with an appropriate dust suppressant, covered or seeded.
- All earth-moving or other dust-producing activities shall be suspended when the above dust control measures prove ineffective in avoiding visible dust plumes during periods of high winds. The wind speed at which this suspension of activity will be required may vary, depending on the moisture conditions at the project site, but suspension of such activities shall be required in any case when the wind speed exceeds 25 miles per hour.

- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the City of Alameda regarding dust complaints. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Construction Health Risk Impacts

During construction, various diesel-powered vehicles and equipment would be in use. In 1998, the ARB identified particulate matter from diesel-fueled engines as a TAC. The ARB has completed a risk management process that identifies potential cancer risks for a range of activities using diesel-fueled engines (CARB, 2000). High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as having the highest associated risk.

Health risks from TACs are a function of both concentration and duration of exposure. Unlike the above types of sources, construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks. Additionally, construction-related sources are mobile and transient in nature, and the emissions occur within the project site. The BAAQMD provides a screening approach to evaluate the potential health risk from exposure to TACs, including diesel particulate matter, and PM_{2.5} from construction activities (BAAQMD, 2011). The BAAQMD's screening tables use conservative assumptions, including assuming a two-year construction duration and that all equipment would operate at the fence line, when actual equipment use will occur in different areas of the site that are further away from sensitive receptors. According to the screening tables a project of this size must be located at a minimum of 492 feet from the closest sensitive receptor to avoid potentially significant health risks.

The closest sensitive receptors to the project site are residences located approximately 500 feet southwest of the project boundary. Therefore, the project would pass the screening size for construction health risk, and construction impacts would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Significance after Mitigation: Less than Significant.

Impact 4.A-2: The proposed project would not generate operational emissions that would result in a considerable net increase of criteria pollutants or precursors for which the air basin is in nonattainment under an applicable federal or state ambient air quality standard or expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM_{2.5}). (Less than Significant)

Long-term air emission impacts are those associated with the operation of area sources and mobile sources related to the proposed project after it is constructed. In addition to the short-term construction emissions, the project would also generate long-term air emissions, such as those associated with changes in permanent use of the project site. These long-term emissions are primarily mobile source emissions that would result from vehicle trips associated with the proposed project. Area sources, such as natural gas heaters, landscape equipment, and use of consumer products, would also result in pollutant emissions. PM₁₀ emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM₁₀ occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. Since much of the project traffic fleet would be made up of light-duty gasoline-powered vehicles, a majority of the PM₁₀ emissions would result from entrainment of roadway dust from vehicle travel.

Energy source emissions result from activities in buildings for which electricity and natural gas are used (non-hearth). The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or cooking equipment. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources.

Area source emissions associated with the project would include emissions from woodburning devices, water heating and the use of landscaping equipment. Emission estimates for the project were calculated using CalEEMod. The ultimate mix of housing units by type (e.g., apartments, condominiums, townhouses) has not been finalized, therefore, for purposes of the air quality analysis, all residential units were assumed to be low-rise apartment units. Emissions for mid-rise apartments, condominiums or townhouses would be similar to the emissions shown in **Table 4.A-5** below, which shows the project's estimated unmitigated operational emissions. Trip generation rates were based on the project's traffic impact analysis, which is presented in Chapter 4.G, *Transportation and Circulation*. The project emission estimates include the Bay Area specific model default values assuming the following: approximately 3 percent of residential units would have wood-stoves, approximately 25 percent would have open hearth fireplaces, and 12 percent of the units would have natural gas fireplaces.

**TABLE 4.A-5
AVERAGE UNMITIGATED OPERATIONAL-RELATED POLLUTANT EMISSIONS^a**

Scenario	ROG	NOx	PM10	PM2.5
Emissions in pounds/day				
Area Source Emissions	281.4	11.6	118.4	118.3
Energy Source Emissions	0.4	3.5	0.3	0.3
Mobile Source Emissions	14.5	30.1	21.3	5.9
Total Emissions	296.2	45.3	139.9	124.6
<i>BAAQMD Operational Threshold</i>	54.0	54.0	82.0	54.0
Significant Impact?	Yes	No	Yes	Yes
Emissions in tons/year				
Area Source Emissions	3.8	0.1	0.2	0.2
Energy Source Emissions	0.1	0.6	0.1	0.1
Mobile Source Emissions	2.4	5.3	3.7	1.0
Total Emissions	6.3	6.0	4.0	1.3
<i>BAAQMD Operational Threshold</i>	10.0	10.0	15.0	10.0
Significant Impact?	No	No	No	No

^a Emissions include results modeled with CalEEMod for project operations. Additional data and assumptions are in Appendix D.

SOURCE: LSA Associates, Inc., 2016.

The daily emissions associated with project operational trip generation, energy and area sources are identified in Table 4.A-5 for ROG, NOx, PM₁₀, and PM_{2.5}. The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project; emissions are released in other areas of the air basin. Because the resulting emissions are dispersed rapidly and contribute only a small fraction of the region's air pollution, air quality in the immediate vicinity of the project site would not substantially change compared to existing conditions or the air quality monitoring data reported in Table 4.A-1.

The results shown in Table 4.A-5 indicate the project would exceed the criteria for daily ROG, PM₁₀ and PM_{2.5} emissions; therefore, the proposed project could have a significant effect on regional air quality and mitigation would be required. The primary source of emissions would be from residential wood burning as indicated in the project's area source emissions.

Implementation of new **Mitigation Measure 4.A-2** would reduce emissions to a less than significant level:

Mitigation Measure 4.A-2: All wood-burning devices, such as woodstoves and open hearth fire places shall be prohibited in residential units. Only natural gas fireplaces shall be permitted.

As shown in **Table 4.A-6**, with implementation of **Mitigation Measure 4.A-2**, emissions associated with the proposed project would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

**TABLE 4.A-6
AVERAGE MITIGATED OPERATIONAL-RELATED POLLUTANT EMISSIONS^a**

Scenario	ROG	NOx	PM10	PM2.5
Emissions in pounds/day				
Area Source Emissions	18.6	0.6	0.3	0.3
Energy Source Emissions	0.4	3.5	0.3	0.3
Mobile Source Emissions	14.4	30.1	21.2	5.9
Total Emissions	3.5	34.3	21.8	6.5
<i>BAAQMD Operational Threshold</i>	54.0	54.0	82.0	54.0
Significant Impact?	No	No	No	No
Emissions in tons/year				
Area Source Emissions	3.3	0.1	0.0	0.0
Energy Source Emissions	0.1	0.6	0.1	0.1
Mobile Source Emissions	2.4	5.3	3.7	1.0
Total Emissions	5.8	6.0	3.8	1.1
<i>BAAQMD Operational Threshold</i>	10.0	10.0	15.0	10.0
Significant Impact?	No	No	No	No

^a Emissions include results modeled with CalEEMod for project operations. Additional data and assumptions are in Appendix D.

SOURCE: LSA Associates, Inc., 2016.

Significance after Mitigation: Less than Significant.

Impact 4.A-3: The proposed project would not expose sensitive receptors to substantial pollutant concentrations (Less than Significant)

BAAQMD defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, colleges and universities, daycares, hospitals, and senior-care facilities. There are existing residential receptors approximately 400 feet from the proposed project site boundary, and planned residential receptors (Del Monte and Marina Shores II) about 50 feet from the proposed project site boundary. There are also sensitive residential receptors (residents of up to 589 dwelling units) proposed to be developed under the proposed project. Pollutant exposure associated with proposed project construction and operations, as well as land use compatibility of locating new residences at the project site are discussed below.

Construction

Construction of the project would result in short-term diesel exhaust emissions (DPM), which are toxic air contaminants (TACs), from onsite heavy-duty equipment and diesel trucks. Exposure of sensitive receptors is the primary factor used to determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. A longer exposure period would result in a higher exposure level. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs

over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of the proposed construction activities (about 46 months) would only constitute a small percentage of the total 70-year exposure period. However, based on the relatively close off-site residential uses, new **Mitigation Measure AIR-3** has been included below in order to ensure that DPM emissions would be reduced to the extent feasible and that potential health risk would be less than significant. Implementation of **Mitigation Measure AIR-1**, which includes measures such as minimizing the idling time of diesel powered construction equipment and requiring that all construction equipment is maintained and properly tuned, would also reduce potential DPM emissions. The GPA EIR did not include a health risk analysis related to construction.

Mitigation Measure AIR-3: The project applicant shall ensure that construction contract specifications include a requirement that all off-road diesel-powered construction equipment used for project improvements shall be equipped with a Level 3 Verified Diesel Emissions Control (VDEC), which would reduce diesel particulate emissions by at least 85 percent.

Operations

The proposed project would result in on-road mobile traffic that could result in localized carbon monoxide (CO) exposure. The proposed project would not result in any sources of TAC emissions. However, an assessment of the potential health risk of locating sensitive residential receptors on the project site is discussed below.

The BAAQMD has established a screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD's CEQA Guidelines, a proposed project would result in a less-than significant impact due to localized CO concentrations if the following screening 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, and the regional transportation plan and local congestion management agency plans.
- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

The proposed project would not conflict with the Alameda County Transportation Commission's (ACTC) program for designated roads or highways, a regional transportation plan, or other agency plans, as the proposed project would not cause the level of service to significantly deteriorate on any regional roadway. In addition, traffic volumes on roadways in the vicinity of the project site are less than 44,000 vehicles per hour. The proposed project would not increase

traffic volumes at affected intersections to more than 44,000 vehicles per hour and would not result in localized CO concentrations that exceed State or federal standards.

Based on the BAAQMD's criteria, project-related traffic would not lead to violations of the CO standards; therefore, no further analysis was conducted for CO impacts of the project at these intersections. This impact would be considered less than significant on a project-level and cumulative basis.

Mitigation: None required.

Impact 4.A-4: The proposed project would not create objectionable odors affecting a substantial number of people. (Less than Significant)

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the concentration in the air. When an odor sample is progressively diluted, the odor concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odor reaches a level that is no longer detectable.

BAAQMD has identified typical sources of odor in the BAAQMD 2011 *CEQA Air Quality Guidelines*, a few examples of which include manufacturing plants, rendering plants, coffee roasters, wastewater treatment plants, sanitary landfills, and solid waste transfer stations. The project would not include any of the above potential sources of objectionable odors.

Mitigation: None required.

Impact 4.A-5: The proposed project would not conflict with or obstruct the implementation of the applicable air quality plan. (Less than Significant)

The applicable air quality plan for the area is the BAAQMD's *2010 Clean Air Plan*. Under BAAQMD's updated 2012 methodology, a determination of consistency with the most recently adopted Clean Air Plan, currently the *2010 Clean Air Plan*, must demonstrate that a plan or project supports the primary goals of the Clean Air Plan, includes applicable control measures of the Clean Air Plan, and would not disrupt or hinder implementation of any control measures of the Clean Air Plan.

Consistency with the Clean Air Plan can be determined if the project does the following:

1) supports the goals of the Clean Air Plan; 2) includes applicable control measures from the

Clean Air Plan; and 3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

Criterion 1: Project Support of the Primary Goals of the 2010 Clean Air Plan

The primary goals of the *2010 Clean Air Plan* are to: attain air quality standards; reduce population exposure to air pollutants and protect public health in the Bay Area; and reduce greenhouse gas emissions and protect the climate. BAAQMD guidance indicates that any project (i.e., project or plan) that does not support the three primary goals of the *2010 Clean Air Plan* would not be considered consistent with the *2010 Clean Air Plan*. Specifically, if approval of a project would not result in significant and unavoidable air quality impacts, after application of all feasible mitigation, the project may be considered consistent with the *2010 Clean Air Plan*.

As indicated under Impact 4.A-1, the proposed project would not exceed the BAAQMD's significance criteria for criteria air pollutant emissions (first goal) with implementation of **Mitigation Measure 4.A-1**. With respect to the second goal (reduction of population exposure to hazardous emissions), the project would result in a less-than-significant impact with respect to exposure to TACs. Likewise, as discussed under Impact 4.A-6, the project would have less than significant impacts with respect to greenhouse gas emissions.

Thus, the proposed project would not hinder the region from attainment of the goals outlined in the *2010 Clean Air Plan*.

Criterion 2: Plan Consistency with Control Measures Contained in the Clean Air Plan

Air pollutant emissions are a function of human activity. The 1988 California Clean Air Act, Section 40919(d) requires regions to implement "transportation control measures to substantially reduce the rate of increase in passenger vehicle trips and miles traveled." The BAAQMD's *2010 Clean Air Plan* contains 59 control measures aimed at reducing air pollution in the Bay Area. Eighteen of these measures address stationary sources and will be implemented by BAAQMD using its permit authority; therefore, they are not suited to implementation through local planning efforts. Sixteen other measures are a draft list of measures for further study and are not yet identified as feasible for implementation under the *2010 Clean Air Plan*. The remaining 25 measures are identified in **Table 4.A-7**. The control strategies of the *2010 Clean Air Plan* include measures in the traditional categories of stationary source measures, mobile source measures, and transportation control measures. The *2010 Clean Air Plan* identifies two new subcategories of control measures – land use and local impact measures, and energy and climate measures. Stationary source measures are not specifically applicable to the proposed project and therefore are not evaluated as part of this Air Quality Impact Analysis.

The project's consistency with the goals of the *2010 Clean Air Plan* are generally described below. **Table 4.A-7** identifies 25 of the Control Strategies in the plan and correlates it to specific elements of each Project scenario or explains why the Strategy does or does not apply to project development. This table shows that the proposed project would be consistent with the Control Strategies contained in the *2010 Clean Air Plan*.

**TABLE 4.A-7
CONTROL STRATEGIES OF THE 2010 CLEAN AIR PLAN**

2010 Clean Air Plan Control Strategy	Elements of the Project Consistent with the Strategy or Explanation of Non-applicability
Transportation Control Measures	
TCM A: Improve Transit Services	The proposed project would be connected to nearby BART stations via a new VTA bus route with a stop on the southern end of the site. This bus route would also connect to downtown Alameda and downtown Oakland. In addition, the project proposes a water taxi or other form of water transit that would connect site residents and visitors with the Oakland Shoreline by traveling across the Oakland Estuary.
TCM B: Improve System Efficiency	Not Applicable: This measure addresses infrastructure improvements to increase operational efficiencies on freeways and transit service (such as common fare payment systems) and are geared toward regional transit agencies and CALTRANS and not local government.
TCM C: Encourage Sustainable Travel Behavior (i.e., voluntary employer-based trip reduction program)	The proposed project is an infill project that supports a mix of uses and will provide connections to nearby transit to encourage residents and visitors to use alternative transportation modes. The project would implement a transportation demand management program that includes the following: an annual fee per residential unit and a per square foot fee for commercial space will be applied to transit services ("Transit Fund"); creation of a Transportation Management Authority (TMA) with representation from each phase of the development shall be established to manage the Transit Fund and plan its transportation programs (or join other existing TMA's); provision of shuttle services (bus and/or water shuttle) to BART on Day One; and an annual report to the City evaluating the effectiveness of the TDM measures.
TCM D: Support Focused Growth (Bicycle and Pedestrian friendliness)	The project would include bicycle and pedestrian facilities for residents, businesses, and onsite streets which connect to the established a bicycle and pedestrian network in the City.
TCM E: Implement Pricing Strategies	The master plan specifies that the TDM program may also include parking programs as part of the overall TDM strategy.
Mobile Source Control Measures	
MSM A-1: Promote Clean Fuel Efficient Vehicles	Not part of the Project. New Mitigation Measure 4.A-4 added to address by identifying, as a TDM, preferential parking for alternative fueled vehicles as one potential element of a TDM program that would be required of all new developments.
MSM A-2: Zero Emission Vehicles	Not part of the project. New Mitigation Measure 4.A-4 added to address by identifying, as a TDM neighborhood electric vehicle programs to reduce the need to have a car or second car vehicles as one potential element of a TDM program that would be required of all new developments.
MSM A-3: Green Fleets	Not Applicable: Development of the project site would generally be retail, commercial or residential in nature and unlikely to accommodate a land use requiring a fleet of vehicles. [NOTE TO REVIEWER: Please confirm]
MSM A-4: Replacement or Repair of High-emitting Vehicles	Not Applicable: This Strategy addresses vehicle buy-back programs implemented by BAAQMD.
MSM B-1: Fleet Modernization for Medium and Heavy-Duty Trucks	Not Applicable: This Strategy addresses incentive programs for truck modernization which are implemented by BAAQMD or CARB.
MSM B-2: Low NOx retrofits in Heavy-Duty Trucks	Not Applicable: This Strategy addresses cash incentives for retrofits which are implemented by BAAQMD or CARB.
MSM B-3: Efficient Drive Trains	Not Applicable: This Strategy addresses development and demonstration programs in partnership with CARB and the California Energy Commission.
MSM C-1: Construction and Farming Equipment	Not Applicable: This Strategy addresses cash incentives for retrofits which are implemented by BAAQMD or CARB.
MSM C-2: Lawn & Garden Equipment	Not Applicable: This Strategy addresses voluntary exchange programs implemented by BAAQMD.

TABLE 4.A-7 (Continued)
CONTROL STRATEGIES OF THE 2010 CLEAN AIR PLAN

2010 Clean Air Plan Control Strategy	Elements of the Project Consistent with the Strategy or Explanation of Non-applicability
Mobile Source Control Measures (cont.)	
MSM C-3: Recreational Vessels	Not Applicable: This Strategy addresses voluntary exchange programs implemented by BAAQMD.
Land Use & Local Impact Measures	
LUM 1: Goods Movement	Not Applicable: The project would not involve any industrial or warehousing uses.
LUM 2: Indirect Source Review Rule	Not Applicable: This Strategy addresses implementation of an indirect source Rule by BAAQMD.
LUM 3: Updated CEQA Guidelines	This Strategy addresses updating of the CEQA Guidelines by BAAQMD. These Guidelines were most recently updated in May of 2012, removing any recommendation of significance thresholds.
LUM 4: Land Use Guidance	This strategy addresses updating land use planning documents such as the proposed development scenarios and demonstrating consistency with air quality protection guidance such as the new BAAQMD CEQA Guidelines that are applied in this analysis.
LUM 5: Reduce Health Risk in Impacted Communities	The most "impacted community" identified in Figure 5-1 of the BAAQMD CEQA Guidelines would be single-family homes to the east of the project site, located across the Oakland Estuary over one-half mile from the project site. As indicated in Impacts 4.A-1 and 4.A-2, health risk impacts of the project would be less than significant.
LUM 6: Enhanced Air Quality Monitoring	Not Applicable: This Strategy addresses air quality monitoring that is the purview of BAAQMD and/or CARB.
Energy & Climate Measures	
ECM 1: Energy Efficiency	The master plan specifies that all buildings should be developed consistent with a LEED Silver designation or its equivalent. Use of solar panels for energy generation is encouraged.
ECM 2: Renewable Energy	See measure ECM-1 above.
ECM 3: Urban Heat Island Mitigation	The proposed project includes a network of parks, landscaped easements, and windrows that would give visual continuity to the site and contribute to the image of a green waterfront characterized by trees, parks, and greenways. The master plan states that street trees shall be provided on all streets and pedestrian areas. Street trees should be planted within the planting strips on each of side of the street and spaced on average every 30 feet.
ECM 4: Shade Tree Planting	The proposed project includes substantial tree planting throughout the project site in developed and open areas in order to enhance the area's visual quality and identity, visually buffer new development, and provide environmental benefits such as micro-climate control.

SOURCE: BAAQMD, 2010a; and ESA, 2016.

Transportation and Mobile Source Control Measures. The BAAQMD identifies control measures as part of the *2010 Clean Air Plan* to reduce ozone precursor emissions from stationary, area, mobile, and transportation sources. The transportation control measures are designed to reduce emissions from motor vehicles by reducing vehicle trips and vehicle miles traveled (VMT) in addition to vehicle idling and traffic congestion. The proposed project would not conflict with the identified transportation and mobile source control measures of the *2010 Clean Air Plan*.

Land Use and Local Impact Measures. The *2010 Clean Air Plan* includes Land Use and Local Impacts Measures (LUMs) to achieve the following: promote mixed-use, compact development to reduce motor vehicle travel and emissions; and ensure that planned growth is focused in a way that protects people from exposure to air pollution from stationary and mobile sources of emissions. The LUMs identified by the BAAQMD are not specifically applicable to the proposed project because they relate to actions the BAAQMD will take to reduce impacts from goods movement and health risks in affected communities. Therefore, the project would not conflict with any of the LUMs of the *2010 Clean Air Plan*.

Energy Measures. The *2010 Clean Air Plan* also includes Energy and Climate Control Measures (ECM), which are designed to reduce ambient concentrations of criteria pollutants and reduce emissions of CO₂. Implementation of these measures is intended to promote energy conservation and efficiency in buildings throughout the community, promote renewable forms of energy production, reduce the “urban heat island” effect by increasing reflectivity of roofs and parking lots, and promote the planting of (low-VOC-emitting) trees to reduce biogenic emissions, lower air temperatures, provide shade, and absorb air pollutants. The energy measures of the *2010 Clean Air Plan* are not specifically applicable to the proposed project.

Criterion 3: Disruption or Hindrance of Applicable Control Measures

The project would develop residential uses in an area that is currently vacant. The proposed project would not hinder or disrupt implementation of any control measures from the *2010 Clean Air Plan*.

BAAQMD has identified examples of how a plan may cause the disruption or delay of control measures, such as a project that may preclude an extension of a transit line or bike path or proposes excessive parking beyond parking requirements. The project would include accommodation of new and improved bus and transit service. Development of the Project site would also include improved pedestrian and bicycle facilities. These elements of project development demonstrate that control measure disruption or delay would not occur.

Trip generation estimates for development of the proposed project used in this analysis included adjustments for development scale, density, diversity of uses, transit accessibility, as well as alternative transportation forecasts (walk, bike, and transit). Therefore, many key elements of alternative mode strategies have been incorporated into the trip generation assumptions.

As discussed above, implementation of the proposed project would not disrupt or hinder implementation of the applicable measures outlined in the *2010 Clean Air Plan*, including Transportation and Mobile Source Control Measures, Land Use and Local Impact Measures, and Energy Measures.

Mitigation Measure 4.A-4: The City shall require that the following measures be implemented, either by the City or the project applicant, or both in combination, to encourage the use of low- and zero-emission vehicles in travel to and from the project site:

- Promote use of clean fuel-efficient vehicles through preferential parking and/or installation of charging stations.

- Promote zero-emission vehicles by providing a neighborhood electric vehicle program to reduce the need to have a car or second car vehicles as one potential element of a TDM program that would be required of all new developments.

The proposed project would support the primary goals of the *2010 Clean Air Plan* and it would not disrupt or hinder implementation of any *2010 Clean Air Plan* control measures. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Significance after Mitigation: Less than Significant.

Cumulative Impacts

Impact 4.A-6: The proposed, when combined with past, present and other reasonably foreseeable development in the vicinity, would not result in cumulative air quality impacts (Less than Significant)

CEQA defines a cumulative impact as two or more individual effects, which when considered together, are considerable or which compound or increase other environmental impacts. According to the BAAQMD, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Therefore, if daily average or annual emissions of operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the proposed project would result in a cumulatively significant impact.

As shown in Table 4.A-6, above, implementation of the proposed project with implementation of **Mitigation Measure 4.A-2** would generate less than significant regional emissions. As shown in the project-specific air quality impacts discussion above, the proposed project would not result in individually significant impacts and therefore would also not make a cumulatively considerable contribution to regional air quality impacts.

With regard to regional criteria air pollutants, according to the BAAQMD, no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. There are many projects throughout the San Francisco Bay area that have been identified as having significant and unavoidable operational and construction-related regional pollutant impacts. Consequently, for assessment of cumulative regional pollutant impacts, BAAQMD has developed a methodology of assessing whether a project would have a cumulatively considerable contribution. According to the BAAQMD *Justification Report*, if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions (BAAQMD, 2009).

As described in Impact 4.A-2, project operational emissions would not exceed the significance thresholds with mitigation. Impacts would therefore be less than significant. As such, combining project emissions with emissions from other projects would not result in cumulatively significant air quality operational impacts.

Mitigation Measure 4.A-10: Implement Mitigation Measures 4.A-1 and 4.A-4.

Significance after Mitigation: Less than Significant.

Impact 4.A-7: The proposed project would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment. (Less than Significant)

GHG impacts are considered to be exclusively cumulative impacts (CAPCOA, 2008). GHG emissions associated with proposed project construction and operations were modeled with CalEEMod (version 2013.2.2) and are described below.

Construction Activities

Construction activities would produce combustion emissions from various sources. During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. In addition, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The BAAQMD does not have an adopted Threshold of Significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod data outputs, the total project construction emissions are estimated to be 979 metric tons of CO₂e per year. Implementation of the construction emission control measures in **Mitigation Measure 4.A-1** would further reduce GHG emissions during the construction.

Operational GHG Emissions

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources, and indirect emissions from sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, and other sources.

Operational emissions estimates for the proposed project are discussed below and were calculated using a method that is consistent with the methodology recommended in the BAAQMD's CEQA Air Quality Guidelines, as described below.

Methodology

The methodology and/or qualitative description of the sources of GHG emissions related to transportation, electricity, water use, and solid waste disposal are described below.

Transportation. Transportation associated with the project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips. Transportation is the largest source of GHG emissions in California and represents approximately 38 percent of annual CO₂ emissions generated in the State. For land use development projects, vehicle miles traveled (VMT) and vehicle trips are the most direct indicators of GHG emissions associated with the project. The proposed project is forecast to generate 4,854 trips per day.

Electricity and Natural Gas. Buildings represent 39 percent of United States primary energy use and 70 percent of electricity consumption (USDoe, 2003). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. The project is anticipated to increase the use of electricity and natural gas; however, as part of the project's compliance with the latest California building code standards, the project is expected to be relatively energy efficient.

Water Use. Water and wastewater related GHG emissions are based on water supply and conveyance, water treatment, water distribution, and wastewater treatment. Each element of the water use cycle has unique energy intensities (kilowatt hours [kWh]/million gallons). Recognizing that the actual energy intensity in each component of the water use cycle will vary by utility, the California Energy Commission (CEC) assumes that approximately 3,950 kWh per million gallons are consumed for water that is supplied, treated, consumed, treated again, and disposed of in northern California.

Solid Waste Disposal. Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Average waste generation rates from a variety of sources are available from the California Department of Resources, Recycling and Recovery (Cal Recycle, 2012). Land filling and other methods of disposal use energy for transporting and managing the waste, and these activities produce additional GHGs to varying degrees. Land filling, the most common waste management practice, results in the release of CH₄ from the anaerobic decomposition of organic materials. CH₄ is 25 times more potent a GHG than CO₂. However, landfill CH₄ can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere.

Project Emissions

When calculating project GHG emissions to compare to the thresholds of significance, BAAQMD recommends that the lead agency consider project design features, attributes, and local development requirements as part of the project as proposed and not as mitigation measures. Consistent with BAAQMD guidance, GHG emissions were estimated using CalEEMod.

Table 4.A-8 shows the calculated GHG emissions for the proposed project. Mobile source emissions are the largest source of GHG emissions at approximately 71 percent of the total. Energy use is next largest category at approximately 24 percent of CO₂e emissions. Area source emissions are less than one percent of the total emissions, and waste and water source emissions

are approximately three percent and two percent, respectively. Additional calculation details are provided in Appendix D.

**TABLE 4.A-8
PROJECT OPERATIONAL GREENHOUSE GAS EMISSIONS (metric tons/year)**

Emissions Source	CO ₂	CH ₄	N ₂ O	CO ₂ e	Percent of Total
Area Source Emissions	7.1	0.0	0.0	7.3	<1
Energy Source Emissions	1,266.7	0.0	0.0	1,274.3	24
Mobile Source Emissions	3,814.0	0.1	0.0	3,817.1	71
Waste Source Emissions	65.7	3.9	0.0	147.2	3
Water Source Emissions	76.2	1.4	0.0	115.4	2
Total Annual Emissions	5,29.7	5.5	0.1	5,361.2	100

SOURCE: LSA Associates, Inc., 2016.

Based on the analysis results, the proposed project would generate 5,361.2 metric tons of CO₂e which would be above the BAAQMD's numeric threshold of 1,100 metric tons CO₂e.

The project would develop 589 residential units which would provide residence for 1,449 people. Additionally, the commercial and marina portion of the project would generate approximately 50 employees for a total service population (residents plus employees) of 1,499. Therefore, the project's GHG emissions would result in a GHG efficiency of 3.5 metric tons CO₂e per service population which is below the BAAQMD's threshold of 4.6 metric tons. According to the BAAQMD, a project would have less-than-significant GHG emissions if it would meet one or more of the criteria. Therefore, because the project result in emissions below the 4.6 metric tons CO₂e per service, the project would not have a significant effect on the environment related to greenhouse gas emissions.

Mitigation: None required.

Impact 4.A-8: The proposed project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. (Less than Significant)

The proposed project would be compliant with the GHG reduction initiatives included in the City's 2008 LAPCP, which are similar to several BAAQMD 2010 *Clean Air Plan* measures discussed in Table 4.A-7 above. In addition, as indicated in Table 4.A-8, GHG emissions generated by construction and operation of the project would be less than the BAAQMD "efficiency threshold" of 4.6 metric tons of CO₂e per service population per year. GHG efficiency metrics were developed for the emissions rates at the State level for the land use sector that would accommodate projected growth (as indicated by population and employment growth) under trend

forecast conditions, and the emission rates needed to accommodate growth while allowing for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020) (BAAQMD, 2009). The project would not impair attainment of GHG reduction goals established pursuant to AB 32 in the *Climate Change Scoping Plan*, because these goals were used in the development of BAAQMD thresholds. The project would have a less-than-significant impact with regard to GHG reduction-planning efforts, because emissions per service population would be below the thresholds developed based on attainment of AB 32 goals.

Mitigation: None required.

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B. Biological Resources

B.1 Introduction

This section identifies the existing biological resources at the project site; identifies the federal, state, and local regulations pertaining to biological resources within the region; and describes project impacts on those biological resources as well as mitigation measures to reduce project-related potentially significant impacts. The environmental setting discussion provides a summary description of biological resources occurring on and around the project site, including identification of any special-status species that have the potential to occur according to the California Natural Diversity Database (CNDDDB), U.S. Fish and Wildlife Service (USFWS), and California Native Plant Society (CNPS) for the applicable U.S. Geological Survey 7.5-minute topographic quadrangles in the vicinity of the project site.

B.2 Environmental Setting

Regional Setting

The project site is located in the Bay Area-Delta Bioregion, as defined by the State's Natural Communities Conservation Program. This bioregion consists of a variety of natural communities that range from the open waters of the Bay and Delta to salt and brackish marshes, to chaparral and oak woodlands. The temperate climate is Mediterranean in nature, with relatively mild, generally wet winters and warm, dry summers. The high diversity of vegetation and wildlife found in Alameda County, which reflects that of the region as a whole, is a result of soils, topography, and micro-climate diversity that combine to promote relatively high levels of endemism.¹ This, in combination with the rapid pace of development in the region, has resulted in a relatively high degree of endangerment for local flora and fauna.

The project area is located on the north-central shoreline of Alameda Island, and includes waters of the Oakland-Alameda Estuary, which is part of the larger San Francisco Bay Estuary. The San Francisco Estuary is designated as a Western Hemisphere Shorebird Reserve Network of international importance, with more than one million shorebirds using regional wetlands each winter. Between 300,000 and 900,000 shorebirds pass through San Francisco Bay during spring and fall migration periods, more than 50 percent of the diving ducks in the Pacific Flyway winter in the shallow wetlands of the Bay, and several species breed in regional wetlands during the summer (Goals Project, 1999).

Alameda Island

The area encompassed by modern-day Alameda Island was historically a combination of shallow bay waters, tidal marshes, and upland habitats (SFEI 2001). The first documented filling of marshes and bay waters began during the 1890s. By the 1920s and 1930s, the portion of the island that became the Alameda Terminal site had been filled, chiefly with dredge materials from

¹ *Endemism* refers to the degree to which organisms or taxa are restricted to a geographical region or locality and are thus individually characterized as endemic to that area.

U.S. Army Corps of Engineers (Corps) projects associated with the Oakland Harbor and other harbors throughout the East Bay. After World War II, filling of San Francisco Bay waters and marshes over time increased the dry land acreage to current levels.

Project Site Setting

As noted in Chapter 3, *Project Description*, the project is located in the north-central portion of the City of Alameda (see **Figure 3-2**). The project site encompasses 32 acres of land and water. Water surrounds the property on two sides with Alaska Basin (called Encinal Basin on some maps) to the west, the Oakland Estuary to the north, and the Fortman Marina to the east. The land to the south of the project includes the Del Monte Warehouse and dense, single family residential developments. The net usable land area of the project site is approximately 22 acres. The terrestrial portions of the site lie between 4 and 8 feet above sea level. There are five structures on the site, all of which are vacant. The project site also includes 10 acres of submerged lands comprising San Francisco Bay and Oakland-Alameda Estuary waters.

In general, the terrestrial portions of the project site are relatively flat with sparse vegetation and primarily paved with concrete and asphalt. There is a wharf constructed of concrete and wood that runs along the northern and western perimeters of the site. Portions of the wharf as well as the northern border of the project site adjacent to the Oakland/Alameda Estuary have piles in varying stages of decay with one portion partially collapsed into the water on the northwest corner. These areas would likely be retrofitted into a Marina under the proposed project and would require in-water construction. For the purposes of this EIR, the biological resources study area includes the terrestrial and marine portions of the project site, as just described.

An ESA biologist conducted a reconnaissance-level field survey of the project area on September 16, 2013, to verify existing biological conditions, assess vegetation and wildlife habitats, and identify potential for special-status plant and animal species² to occur onsite. The project site is an urban landscape that supports minimal vegetation which grows solely from cracks in the asphalt and consists of telegraph weed (*Heterotheca grandiflora*), stinkwort (*Dittrichia graveolens*), annual fire weed (*Epilobium brachycarpum*), sweet fennel (*Foeniculum vulgare*), cudweed (*Pseudognaphalium* sp.), and pampas grass (*Cortaderia* sp.), of which the majority are non-native weedy species and are not conducive to supporting habitats that favor sensitive species. Non-native acacia (*Acacia* sp.), bottlebrush (*Callistemon citrinus*), loquat (*Eriobotrya japonica*), and pine (*Pinus* sp.) trees line the slim vegetated strip beyond the chain-link fence along the north and east perimeter of the site. Algerian ivy (*Hedera algeriensis*) covers a majority of the north fence line. Wildlife observed during the survey included California ground squirrel (*Otospermophilus beecheyi*) and avian species common to the adjacent Oakland-Alameda Estuary including belted kingfisher (*Megaceryle alcyon*), western gull (*Larus occidentalis*),

² The term “special-status” species includes those species that are listed and receive specific protection defined in federal or state endangered species legislation, as well as species not formally listed as Threatened or Endangered, but designated as “Rare” or “Sensitive” on the basis of adopted policies and expertise of state resource agencies or organizations, or local agencies such as counties, cities, and special districts. A principle source for this designation is the California “Special Animals List” (CDFG, 2009B). state endangered species legislation, as well as species not formally listed as Threatened or Endangered, but designated as “Rare” or “Sensitive” on the basis of adopted policies and expertise of state resource agencies or organizations, or local agencies such as counties, cities, and special districts. A principle source for this designation is the California “Special Animals List” (CDFG, 2011).

Canada goose (*Branta canadensis*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), killdeer (*Charadrius vociferus*), double-crested cormorant (*Phalacrocorax auritus*), and other gull species (*Larus* sp.).

While Alameda Island is largely urbanized, the waters surrounding the island support a variety of marine waterfowl. Birds common to the Oakland-Alameda Estuary and Alaska Basin on the northern side of the island include Canada geese (*Branta canadensis*), American coot (*Fulica americana*), northern shoveler (*Anas clypeata*), common goldeneye (*Bucephala clangula*), American wigeon (*Anas americana*), mallard (*Anas platyrhynchos*), bufflehead (*Bucephala albeola*), double-crested cormorant (*Phalacrocorax auritus*), California brown pelican (*Pelecanus occidentalis*), podiceps grebes, great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), black-crowned night heron (*Nycticorax nycticorax*), and a variety of gulls (*Larus* spp.). Habitats and species that are likely to occur within the project area are further described below.

Developed Land

The few existing structures onsite provide little wildlife habitat and essentially no habitat for plants other than opportunistic weedy species adapted to harsh conditions or the horticultural plants used in limited landscaped areas. Wildlife species utilizing urban areas must be able to tolerate the presence of humans and their activities and are typically generalists, capable of utilizing the limited food sources available, such as garbage and horticultural plants and their fruit. Urban wildlife species found in the Alameda area include common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), Norway rat (*Rattus norvegicus*), Virginia opossum (*Didelphis virginiana*), and feral cats. Several exceptions to the generalist rule are red-tailed hawk, which prey on rodents, and Cooper's hawk (*Accipiter cooperii*) and peregrine falcon (*Falco peregrinus anatum*), which prey almost exclusively on small to medium sized birds. Bats may also colonize unoccupied portions of the warehouses located onsite.

Open Water, Aquatic, and Subtidal Habitat

Open water is found in the Alaska Basin to the west of the project site and in the Oakland-Alameda Estuary to the north and east of the project site, which are hydrologically connected to San Francisco Bay. The Oakland-Alameda Estuary was originally a tidal slough, but was dredged in the mid- to late 1800s to create a viable port and shipping channel. The estuary is influenced by both freshwater and marine water. It receives freshwater inflow from a combination of natural creeks, human-made stormwater drainage facilities, and direct surface runoff. The estuary is also influenced by the marine waters of the Bay and is subject to tidal currents. Sediment from Oakland's shoreline and creeks is carried by the tidal current to shoals and sandbars, causing siltation of the nearby shipping channels. The open waters adjacent to the study area are typical of San Francisco Bay waters in general and have primarily silty mud and sand substrates that are naturally no more than 25 feet deep, although dredging operations for shipping operations in the Oakland-Alameda Estuary may increase water depth to more than 50 feet (DVA, 2013).

Subtidal plants and submerged aquatic vegetation occur throughout Bay waters on both soft and hard substrate. Aquatic vegetation in the project area may include green algae (*Ulva/Enteromorpha*, *Gracillaria verrucosa*, *Ruppia maritima*, and *Potamogeton pectinatus*), which are common in subtidal habitats. Eelgrass beds (see further discussion in the Special Status Natural Communities discussion below) are found in the Oakland-Alameda Estuary approximately two miles northwest of the project area, adjacent to the northern edge of Alameda Point, and in small patches on the south side of Alameda Island near the southeastern terminus of the breakwater (Subtidal Goals Project 2010a). Benthic, or bottom-dwelling, fauna in the open waters of San Francisco Bay and the Oakland-Alameda Estuary, include a large variety of invertebrates, such as polychaetes (i.e., marine worms), crustaceans (e.g., crabs, amphipods, and isopods), mollusks such as clams and mussels, echinoderms, and fishes such as halibut and sole. Pelagic organisms also are widely observed and include planktonic organisms (e.g., phytoplankton, copepods, and larval animals), crustaceans (e.g., shrimps and mysids), and many bony fish and shark species. These lower taxa provide a prey base for the higher taxa, such as marine mammals and birds, which also are commonly present in this environment (DVA, 2013).

San Francisco Bay and the Oakland-Alameda Estuary support a wide variety of fishes, including special-status species such as steelhead (*Oncorhynchus mykiss irideus*), Chinook salmon (*Oncorhynchus tshawytscha*), and green sturgeon (*Acipenser medirostris*). Three species of pelagic fish account for 99 percent of the total abundance of fish regularly sampled in both the deep water and shallow areas of the Central Bay. Northern anchovy (*Engraulis mordax*) is the overwhelming dominant species, accounting for up to 94 percent of those fish inhabiting the water column. Pacific herring (*Clupea pallasii*) and jacksmelt (*Atherinopsis californiensis*) are the second and third most common fish taxa in Central Bay waters, together accounting for an additional five percent of the fish sampled on an annual basis. The remaining 30 species collectively account for less than one percent of the fish species present annually. Although it is not federally or State listed, the San Francisco Bay Pacific herring fishery is one of the last remaining fisheries in the San Francisco Bay, and is currently suffering significant declines. Because of its commercial importance, the fishery is regulated by the California Department of Fish and Wildlife (CDFW), and the Pacific herring population and spawning success within the San Francisco Bay are closely monitored. Marine vegetation, such as eelgrass and algae, are the preferred substrate for herring spawning. However, pier pilings, riprap, and other rigid, smooth structures within Bay waters also serve as spawning substrate (Goals Project, 2000).

Unvegetated, open waters within the project area, including the Oakland-Alameda Estuary and Alaskan Basin provide refuge and foraging habitat for a variety of resident and migratory birds. The San Francisco Bay-Delta is an important wintering and stop-over site for the Pacific Flyway. More than 300,000 wintering waterfowl use the Bay and associated salt ponds. Bird guilds that use the open waters of the Bay include the diving birds, which feed in deeper water on benthic invertebrates; dabblers, which feed in the upper water column of shallow subtidal areas; piscivores, which feed on fish; and opportunistic predators.

In general, the presence of marine mammals in San Francisco Bay and adjoining waters is related to distribution and presence of prey species and foraging habitat. Additionally, harbor seals (*Phoca vitulina*) and California sea lions (*Zalophus californianus*) use various intertidal

substrates that are exposed at low to medium tide levels for resting and breeding. Marine mammals known to occur in San Francisco Bay that may be found in the project vicinity include California sea lion and harbor seal.

Special-Status Species

A number of species known to occur in the project vicinity are protected pursuant to federal and/or State of California endangered species laws, or have been designated Species of Special Concern by CDFW. In addition, Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides a definition of rare, endangered, or threatened species that are not included in any listing, provided they meet certain criteria (e.g., it can be shown that the species' survival in the wild is in jeopardy or the species is at risk of becoming endangered in the near future).³ Species recognized under these terms are collectively referred to as "special-status species." For the purposes of this EIR, special-status species include:

- Plant and wildlife species listed as rare, threatened or endangered under the federal or state endangered species acts.
- Species that are candidates for listing under either federal or state law.
- Species designated by CDFW as Species of Special Concern.
- Raptors (birds of prey), which are specifically protected by California Fish & Game Code Section 3503.5, which prohibits the take, possession, or killing of raptors and owls, their nests, and their eggs;⁴ and
- Species that may be considered rare or endangered pursuant to Section 15380(b) of the CEQA Guidelines (such as those listed as "Special Animals" by CDFW, which include species on CDFW's watchlist, USFWS Birds of Conservation Concern, and colonial nesting birds).

Appendix E of this document provides comprehensive lists of special-status species that have been documented within, or have potential to occur in suitable habitat within, the vicinity of the project. These lists include occurrences documented by the CNDDB (CDFW, 2013), CNPS Electronic Inventory (CNPS, 2013), and the U.S. Fish and Wildlife Service (USFWS, 2013). The CNDDB and USFWS database searches found 86 special status plant and animals species documented within the Oakland West, Oakland East, Richmond, and San Leandro U.S. Geological Survey (USGS) quadrangles, which surround the project site (CDFW, 2014). Of these 86 species identified within the four quadrangles, 36 plants and 27 animals are associated with specific habitat types such as cismontane woodland, valley and foothill grassland, chaparral,

³ These criteria have been modeled after the definition in the FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the CEQA Guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a "species of concern" that has not yet been listed by either the USFWS or CDFW. For example, vascular plants listed as rare or endangered or as California Rare Plant Ranks 1 or 2 by the CNPS and CDFW are considered subject to Section 15380(b).

⁴ The inclusion of birds protected by Fish & Game Code Section 3503.5 is in recognition of the fact that these birds are substantially less common in California than most other birds, having lost much of their habitat to development, and the recognition that the populations of these species are therefore substantially more vulnerable to further loss of habitat and to interference with nesting and breeding than are most other birds. It is noted that a number of raptors and owls are already specifically listed as threatened or endangered by state and federal wildlife authorities.

coastal scrub, riparian woodland, and alkali playa; none of which are found on the project site. **Appendix E** lists special-status plants and animals, their preferred habitats and plant blooming periods, and their potential to occur in the project area. Conclusions regarding habitat suitability and species occurrence are based on the results described in previous studies, the reconnaissance survey conducted by ESA on September 16, 2013, as well as the analysis of existing literature and database queries described above. As the proposed project was initially analyzed under the *Northern Waterfront General Plan Amendment EIR* in 2006, those findings were also considered.

It was then determined whether there is a low, moderate, or high potential for species occurrence at the project site based on previous special-status species record locations and current site conditions. Based on review of the biological literature of the region, information presented in previous environmental documentation, and an evaluation of the habitat conditions of the project area, a species was designated as “absent” if: (1) the species’ specific habitat requirements (e.g., serpentine grasslands, as opposed to grasslands occurring on other soils) are not present, or (2) the species is presumed, based on the best scientific information available, to be extirpated from the project area or region. A species was designated as having a “low potential” for occurrence if: (1) its known current distribution or range is outside of the project area or (2) only limited or marginally suitable habitat is present within the project area. A species was designated as having a “moderate potential” for occurrence if: (1) there is low to moderate quality habitat present within the project area or immediately adjacent areas or (2) the project area is within the known range of the species, even though the species was not observed during biological surveys. A species was designated as having a “high potential” for occurrence if: (1) moderate to high quality habitat is present within the project area, and (2) the project area is within the known range of the species. Only species with a moderate or high potential for occurrence are discussed further in this section. Species unlikely to occur within the project area due to lack of suitable habitat or range were eliminated from the discussion.

Special Status Plant Species

No special status plant species are expected to occur onsite as the project is located on a paved peninsula with no natural habitat present to support such species. Only landscaped trees and shrubs located along the north and west perimeter and common weedy species growing from cracks in the pavement are found at the project site.

Special Status Animal Species

The following special status animal species were determined to have a moderate to high potential to occur at or in the vicinity of the project site.

Special Status Fish Species

Green sturgeon (*Accipinser medirostris*). The southern Distinct Population Segment (DPS) of green sturgeon is a federal threatened species and a California Species of Special Concern. This anadromous fish is the most widely distributed member of the sturgeon family and the most marine-oriented of the sturgeon species. Green sturgeons range in the nearshore waters from Mexico to the Bering Sea and are common occupants of bays and estuaries along the western coast of the

United States (Moyle et al., 1995). Adults in the San Joaquin Delta are reported to feed on benthic invertebrates including shrimp, amphipods and occasionally small fish (Moyle et al., 1995) while juveniles have been reported to feed on opossum shrimp and amphipods. Adult green sturgeons migrate into freshwater beginning in late February with spawning occurring in March through July, with peak activity in April and June. After spawning, juveniles remain in fresh and estuarine waters for 1-4 years and then begin to migrate out to the sea (Moyle et al., 1995). The upper Sacramento River has been identified as the only known spawning habitat for green sturgeon in the southern DPS. However, the entire San Francisco Bay has been designated as critical habitat for the species and there is some potential for green sturgeon to occur in project area waters.

Central California coast coho salmon (*Oncorhynchus kisutch*). The Central California coast coho salmon is a federally listed threatened and state-listed endangered ESU. Adult coho migrate through San Francisco Bay after heavy late fall or winter rains to spawn in the Sacramento/San Joaquin Delta. Juvenile coho potentially occur in San Francisco Bay in the spring, summer, and fall and may be present in project waters in low numbers.

The project site is outside of designated critical habitat for Central California Coast coho salmon, which includes the waters of San Francisco Bay north of the Bay Bridge.

Central Valley and Central California coastal steelhead (*Oncorhynchus mykiss*). Steelhead populations in the Central California Coast Evolutionarily Significant Unit (ESU) are listed as threatened under the federal Endangered Species Act (FESA) and Central Valley Distinct Population Segments (DPS) are listed as threatened under FESA and the California Endangered Species Act (CESA). Steelhead possess the ability to spawn repeatedly, maintaining the mechanisms to return to the Pacific Ocean after spawning in freshwater. Juvenile steelhead may spend up to four years residing in fresh water prior to migrating to the ocean as smolts. Central Valley steelhead migrate through Central Bay waters between freshwater spawning and rearing areas in the Central Valley and the Pacific Ocean, and may occasionally occur seasonally in the waters of the project area during migration. The project site is outside of critical habitat for Central Valley steelhead, which includes the waters of San Francisco Bay north of the Bay Bridge. Central California coastal steelhead have small spawning runs in south Bay creeks, Alameda Creek, and, possibly San Leandro Creek (Goals Project 2000). Fish migrating to and from these spawning grounds may also occur in project area waters.

Critical habitat for Central California coastal steelhead includes all river reaches and estuarine areas accessible to steelhead in coastal river basins, from the Russian River to Aptos Creek (inclusive), and the drainages of San Francisco and San Pablo Bays. Also included are adjacent riparian zones, all waters of San Pablo Bay west of the Carquinez Bridge, and all waters of San Francisco Bay to the Golden Gate. Therefore, critical habitat for this DPS includes the waters adjacent to the project area.

Longfin Smelt (*Spirinchus thaleichthys*). The longfin smelt is a state-listed endangered species and a candidate being considered for listing as endangered or threatened by the USFWS (USFWS 2012). The longfin smelt is a pelagic (living in open water) schooling fish known to inhabit the San Francisco Bay-Delta, including all of the waters of the Central Bay including the waters

adjacent to Alameda Point (Robinson and Greenfield 2011). Although observed in Central San Francisco Bay waters throughout the year, longfin smelt migrate to the fresher water of the Delta to spawn in the winter, returning to bay waters in late spring. No critical habitat has been designated for this species.

Sacramento River winter-run, Central Valley spring-run, and Central Valley fall-run Chinook Salmon (*Oncorhynchus tshawytscha*). The population of Chinook salmon in San Francisco Bay is comprised of three distinct races: winter-run, spring-run, and fall/late fall-run. These races are distinguished by the seasonal differences in adult upstream migration, spawning, and juvenile downstream migration. Chinook salmon are anadromous fish, spending three to five years at sea before returning to fresh water to spawn. These fish pass through San Francisco Bay waters to reach their upstream spawning grounds. In addition, juvenile salmon migrate through the Bay en route to the Pacific Ocean.

Sacramento River winter-run Chinook salmon, listed as both state and federally endangered, migrate through San Francisco Bay from December through July with a peak in March (Moyle, 2002). Spawning is confined to the mainstem Sacramento River and occurs from mid-April through August (Moyle, 2002). Juveniles emerge between July and October, and are resident in their natal stream 5-10 months followed by an indeterminate residency period in estuarine habitats (Moyle, 2002). Adult winter-run Chinook salmon can be found in San Francisco Bay beginning November through December.

The State and federal-listed threatened Central Valley spring-run Chinook salmon migrate to the Sacramento River from March to September with a peak spawning period between late August and October (Moyle, 2002). Juvenile salmon emerge between November and March, and are resident in streams for a period of 3 to 15 months before migrating to downstream habitats (Moyle, 2002). Adults are found in San Francisco Bay during the migratory period in the spring, and juveniles have the potential to inhabit the Bay in the fall, winter, and spring. Spring-run chinook may occur in project area waters in low numbers.

The Central Valley fall/late fall-run Chinook salmon is a California Species of Special Concern. These salmon enter the Sacramento and San Joaquin Rivers from June through December and spawn from October through December, with a peak in November. Adult fall-run Chinook salmon are not expected to occur in the project area.

Adult and juvenile (smolts) winter-run, spring-run, and fall-run Chinook salmon may occasionally occur in waters adjacent to the project area during migrations between the Pacific Ocean and upstream freshwater spawning habitat.

Critical habitat for winter-run and spring-run chinook includes all waters of San Francisco Bay north of the Bay Bridge. Therefore, the project area is outside designated critical habitat for these taxa.

Pacific herring (*Clupea pallasii*) is neither a protected species under the FESA or CESA nor a managed fish species under the Magnuson-Stevens Act. Pacific herring does, however, represent a species of special concern for San Francisco Bay since it is an important member of the

San Francisco Bay marine ecosystem; provides an important food source for marine mammals, sea birds, and fish; and constitutes a state fishery that is entirely conducted within an urban estuary, making it particularly susceptible to anthropogenic impacts. As a state fishery it is regulated under Sections 8550-8559 of the California Fish and Game Code.

The species is both a popular sport fish and a commercially important species. The Pacific herring is a small schooling marine fish that enters estuaries and bays to spawn. This species is known to spawn along the Oakland and San Francisco waterfronts and attach its egg masses to eelgrass, seaweed, and hard substrates such as pilings, breakwater rubble, and other “hard surfaces”. An individual can spawn only once during the season, and the spent female returns to the ocean immediately after spawning. Spawning usually takes place between October and March with a peak between December and February. After hatching, juvenile herring typically congregate in San Francisco Bay during the summer and move into deeper waters in the fall. Pacific herring may be present in project area waters and may spawn there in some years.

Special Status Bird Species

California least tern (*Sternula antillarum browni*). California least tern is federally and State-listed as endangered and is also a state Fully Protected species. The California least tern is the smallest tern in North America and it forages over open water or protected bays, skimming low over the water or diving for small fish. The California least tern breeds on sandy beaches along the coast of California south to Mexico, and winters in Mexico, Central America, and south to South America. The majority of current nesting colonies and the population are found in southern California, with smaller populations in the San Francisco Bay Area and in Baja California (DVA, 2013). The California least tern was first documented nesting at the former Naval Air Station (NAS) Alameda in 1976, while the air station and its runways were still active. Since that time and the closure of NAS Alameda, the colony has grown to be the largest in the San Francisco Bay Area (DVA, 2013), with the second largest occurring at Hayward Regional Shoreline, about 14 miles southeast of the project area (Reinsche et al., 2012). The majority of least terns typically arrive at Alameda by late April. Least terns nest almost entirely within the fenced tern colony on the Federal Property with the exception of occasional instances of terns attempting to nest outside of the fenced area. Terns also fledge to and roost outside of the fenced colony. Least terns use the adjacent open waters of San Francisco Bay, nearby Seaplane Lagoon, and the Oakland-Alameda Estuary for foraging. Tern foraging primarily occurs in the waters south and west of the colony (DVA, 2013).

Peregrine falcon (*Falco peregrinus*). Listed as Fully Protected⁵ under the California Fish and Game Code, the peregrine falcon was removed from the federal list of threatened and endangered species in 1999 and the State list of threatened and endangered species in 2008 due to recovery. Peregrines are known throughout California and is a year-around resident along the Pacific coast. The peregrine is a specialist, preying primarily on mid-sized birds, such as pigeons and doves, in flight. Occasionally these birds will take insects and bats. Although typical nesting sites for the species are tall cliffs, preferably over or near water, peregrines are also known to use urban sites, including the Bay Bridge and tall buildings in San Francisco and San Jose, and throughout the

⁵ A California fully protected species cannot be taken at any time, except, under certain circumstances, in association with a species recovery plan.

Bay Area. Peregrine falcons nest annually on the Fruitvale Bridge between Oakland and Alameda and in other urban sites throughout the Bay Area. Peregrines are also known to use structures at the Port of Oakland for roosting (but are not known to nest there) and are observed regularly within the project area. In recent years, peregrines have been one of the top predators at the California least tern colony during the breeding season (DVA, 2013).

California brown pelican (*Pelecanus occidentalis californicus*). A state Fully Protected species, which was removed from the federal and State lists of threatened and endangered species in 2009 due to recovery, are found in estuarine, marine subtidal, and marine pelagic waters throughout coastal California (Zeiner et al., 1990). Important habitat for pelicans during the nonbreeding season includes roosting and resting areas, such as offshore rocks, islands, sandbars, breakwaters, and pilings. Suitable areas need to be free of disturbance. This species rests temporarily on the water or isolated rocks, but roosting requires a dry location near food and a buffer from predators and humans.

In 1998 a large number of California brown pelican was known to roost on Breakwater Island at Alameda Point during late summer through fall. This was the largest roost, and the only known night roost, in the San Francisco Bay Area at that time (USFWS 1998). More recently, the California brown pelican was described as using Breakwater Island at Alameda Point as a winter roosting area (DVA, 2013). Pelicans forage for small surface-schooling fish, primarily anchovy, in the adjacent Bay waters.

Great horned owl (*Bubo virginianus*). This species, like other raptors and birds in general, is protected under California Fish and Game Code Sections 3503 and 3503.5. Great horned owls occur throughout North America and are found in a variety of wooded habitats. These large raptors prey on small to medium-sized mammals such as voles, rabbits, skunks, and squirrels. Great horned owls can often be seen and heard at dusk, perched in large trees. They roost and nest in large trees such as pines or eucalyptus. They often use the abandoned nests of crows, ravens, or sometimes squirrels (Ehrlich et al., 1988; Sibley, 2000). Great horned owls may use large trees in the area for roosting or nesting and may forage in the project area for small mammals.

Red-tailed hawk (*Buteo jamaicensis*). Red-tailed hawks are commonly found in woodlands and open country with scattered trees. These large hawks feed primarily on small mammals, but will also prey on other small vertebrates, such as snakes and lizards, as well as on small birds and invertebrates. Red-tailed hawks nest in a variety of trees in urban, woodland, and agricultural habitats and are the most common hawk observed in the urban Bay Area. The Alameda County Breeding Bird Atlas does not confirm nesting by this species on Alameda Island, and the species was not documented as nesting there in 2013 (City of Alameda 2013). Two red-tailed hawks were observed roosting in a willow wetland habitat on the southern border of the Northwest Territories at Alameda Point during ESA's 2013 reconnaissance survey. Red-tailed hawks are protected under Section 3503.5 of the California Fish and Game Code.

California gull (*Larus californicus*). The California gull, formerly a State Species of Special Concern due to declining numbers in their historical breeding population at Mono Lake, is currently on the CDFW watchlist. Nesting colonies in California are still considered to be of conservation concern

by CDFW, even though the species has established large breeding colonies in the San Francisco Bay area, primarily located in the South Bay (Ackerman et al. 2006). The California gull is a medium-sized gull with a yellow bill with a black ring, and yellow legs. The species breeds primarily at lakes and marshes in interior western North America from Canada south to eastern California and Colorado (Sibley 2000). Birds that breed inland are migratory, most moving to the Pacific coast in winter. More recently, the species has been breeding in large numbers at the salt ponds of south San Francisco Bay. They nest in colonies, sometimes with other bird species. The nest is a shallow depression on the ground lined with vegetation and feathers. The female usually lays 2 or 3 eggs and both parents feed the young birds. California gulls forage in flight or pick up objects while swimming, walking or wading and the primarily eat insects, fish, and eggs. They also scavenge at garbage dumps or docks. California gulls may have negative effects on other ground-nesting birds and have been found to be significant predators on American avocet, black-necked stilt and western snowy plover eggs and chicks (*ibid.*).

Caspian tern (*Hydroprogne caspia*). The Caspian tern is listed on CDFW's Special Animals List and nests on sandy or gravelly beaches and shell banks in small colonies inland and along the coast. Foraging habitat includes inland fresh-water lakes and marshes, and also brackish or salt waters of estuaries and bays.

Osprey (*Pandion haliaetus*). The osprey is a former California Species of Special Concern and nesting osprey are currently on the CDFW Watchlist. Osprey are also protected under Section 3503.5 of the California Fish and Game Code. These large fish-eating raptors can be found around nearly any water body, including salt marshes, rivers, ponds, reservoirs, estuaries, and oceans. Historically, ospreys nested throughout much of California but by the 1960's much of the osprey population declined in central and southern California area. This decline was attributed to human persecution, habitat alteration, and DDT use. The osprey prefers to nest within sight of permanent water and readily builds its nest on manmade structures, such as telephone poles, channel markers, duck blinds, and nest platforms designed especially for it. A nesting pair has bred successfully at the end of Breakwater Island at Alameda Point and, more recently, on one of the MARAD ships moored in Seaplane Lagoon (City of Alameda 2013a and b). The nest failed in 2013 (City of Alameda 2013b)

Double-crested cormorant (*Phalacrocorax auritus*). The double-crested cormorant is a former Species of Special Concern in California and its nesting colonies are still considered a resource of conservation concern by the CDFW. A yearlong resident along the entire coast of California, the species is fairly common to locally very common along the coast and in estuaries and salt ponds. The species forages mainly on fish, crustaceans, and amphibians. It sometimes feeds cooperatively in flocks of up to 600, often with pelicans, and nests in colonies of a few to hundreds of pairs (Zeiner et al., 1990). There are known breeding colonies within the Bay on Yerba Buena and Alcatraz Islands, as well as the Richmond-San Rafael and Bay Bridges.

Other breeding and migratory birds. Alameda Island and surrounding Bay waters provide habitat for over a diversity of birds, with some species as year-round residents, other species as winter residents, and still others passing through along the Pacific Flyway during spring and fall migrations. Avian diversity in urbanized areas is highest where relatively large sized, diverse patches of habitat

remain. Trees, shrubs, grasslands, seasonal and tidal wetlands, and buildings within the project area provide foraging and nesting habitat for a variety of birds as well as patches of habitat for potential use by migrants as stop-over sites. As discussed further below in the Regulatory Framework, most migratory birds are protected from harm by the federal Migratory Bird Treaty Act and nearly all breeding birds in California are protected under the California Fish and Game Code (Section 3503).

Special Status Mammal Species

Townsend's big-eared bat (*Corynorhinus townsendii*). Townsend's big-eared bat is distributed along the Pacific coast from British Columbia south to central Mexico and east into the Great Plains, with isolated populations occurring in the central and eastern United States. It has been reported in a wide variety of habitat types ranging from sea level to over 7,000 feet elevation. Habitat associations include coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. While its distribution is strongly correlated with the availability of caves and cave-like roosting habitat, including abandoned mines, the species has also been reported to utilize buildings, bridges, rock crevices and hollow trees as roost sites. Over 90 percent of the species' diet consists of moths. The species has been reported along the northern Alameda Island shoreline roosting in buildings (City of Alameda 2010) and may occur in the project area, most likely only on a transient basis.

Harbor seal (*Phoca vitulina richardii*). The harbor seal is a year-round resident in San Francisco Bay and is routinely seen in Bay waters. Harbor seals are protected under the Marine Mammal Protection Act (described below in the Regulatory Framework). They have been observed as far upstream in the Delta and Sacramento River as the City of Sacramento, though their use of the habitat north of Suisun Bay is irregular (Goals Project, 2000).

Harbor seals feed in the deepest waters of the bay, with the region from the Golden Gate to Treasure Island and south to the San Mateo Bridge being the principal feeding site (Kopeck and Harvey 1995). Harbor seals feed on a variety of fish, such as perch, gobies, herring, and sculpin. As noted above in the discussion of riprap habitat, harbor seals use Breakwater Island at Alameda Point as a haul-out but the site is not expected to be used for pupping.

California sea lion (*Zalophus californianus*). Like the harbor seal, the California sea lion is a permanent resident in the San Francisco Bay-Delta and protected by the Marine Mammal Protection Act. A common, abundant marine mammal, they are found throughout the West Coast, generally within 10 miles of shore. They breed in Southern California and the Channel Islands, after which they migrate up the Pacific coast to the bay. They haul out on offshore rocks, sandy beaches, and onto floating docks, wharfs, vessels, and other man-made structures in the bay and coastal waters of the state. California sea lions feed on a wide variety of seafood, mainly squid and fish and sometimes clams. California sea lions may occasionally forage in the waters of the project area in the adjacent Oakland Estuary.

Special-Status Natural Communities

Special-status natural communities are designated by various resource agencies, such as the CDFW, or in local policies and regulations, and are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent or distribution, and are considered threatened enough to warrant some sort of protection. CDFW tracks communities it believes to be of conservation concern through its *List of California Terrestrial Communities* (CDFG, 2010) and the California Natural Diversity Database (CNDDB), and these communities are typically considered special-status for the purposes of CEQA analysis (CDFG, 2009). Special-status natural communities listed by CNDDB as occurring within the project vicinity include northern coastal salt marsh, northern maritime chaparral, serpentine bunchgrass grassland, and valley needlegrass grassland; however, none of these habitats occur within the project area.

Certain waters of the U.S. are considered “special aquatic sites” because they are generally recognized as having unique ecological value. Such sites include sanctuaries and refuges, mudflats, wetlands, vegetated shallows, eelgrass beds, and coral reefs. Special aquatic sites are defined by the U.S. EPA and may be afforded additional consideration in the permit process for a project covered under federal regulations or requiring federal agency approvals. Within San Francisco Bay, two sensitive natural communities that are routinely afforded special attention are submerged aquatic vegetation beds, such as eelgrass beds, and native oyster beds. A long term monitoring site for native oysters is located on the southern shore of Alameda Island at the Encinal Boat ramp. Eelgrass beds are known to occur off the western and northern shores and in several small patches within Seaplane Lagoon on the southern shore of Alameda Point. The closest mapped eelgrass beds are located within the Oakland-Alameda Estuary approximately two miles northwest of the project area.

Critical Habitat and Essential Fish Habitat

The USFWS and National Marine Fisheries Service (NMFS) designate critical habitat for species that they have listed as threatened or endangered. “Critical habitat” is defined in Section 3(5)(A) of the Federal Endangered Species Act as those lands (or waters) within a listed species’ current range that contain the physical or biological features that are considered essential to the species’ conservation, as well as areas outside the species’ current range that are determined to be essential to its conservation. Critical habitat for green sturgeon and Central California coast steelhead is designated in San Francisco Bay and includes the waters within and adjacent to the project area.

Additionally, essential fish habitat (EFH) (see *Regulatory Framework* section below for further discussion on EFH) is present in the study area for Pacific groundfish, coastal pelagics, and Pacific Coast salmon. As noted above, several threatened and endangered salmonids have potential to occur in project area waters. Pacific groundfish species include species of rockfishes, flatfishes, sharks, and others. Coastal pelagic species include Pacific herring, northern anchovy, Pacific sardine, and jack mackerel (WETA 2011). Eelgrass in particular is designated as EFH for various federally-managed fish species within the Pacific Coast Groundfish and Pacific Coast Salmon Fisheries Management Plans (FMP). Eelgrass is also considered a habitat area of particular concern (HAPC) for various species within the Pacific Coast Groundfish FMP. An HAPC is a subset of EFH; these areas are rare, particularly susceptible to human-induced degradation, especially ecologically important, and/or located in an environmentally stressed area.

Jurisdictional Waters

San Francisco Bay and the Oakland-Alameda Estuary are considered navigable Waters of the United States; therefore, they are “jurisdictional” waters regulated by the Corps under Section 10 of the Rivers and Harbors Act up to mean high water and Section 404 of the Clean Water Act (CWA) up to the mean high tide line. These waters are also regulated by the RWQCB as Waters of the State and by the San Francisco Bay Conservation and Development Commission (BCDC), which has jurisdiction over all areas of San Francisco Bay that are subject to tidal action, as well as a 100-foot shoreline band.

B.3 Regulatory Framework

This subsection briefly describes federal, state, and local regulations, permits, and policies pertaining to biological resources and wetlands as they apply to the proposed project.

Special-Status Species

Federal Endangered Species Act

The USFWS, which has jurisdiction over plants, wildlife, and most freshwater fish, and the National Marine Fisheries Service (NMFS), which has jurisdiction over anadromous fish, marine fish, and mammals, oversee implementation of the Federal Endangered Species Act (FESA). Section 7 of the FESA mandates that all federal agencies consult with the USFWS and NMFS to ensure that their actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species. A federal agency is required to consult with USFWS and NMFS if it determines that the construction or operation of the proposed project “may affect” federally listed species or designated critical habitat. The FESA prohibits the “take”⁶ of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery.

Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the removal, possession, damage, or destruction of any endangered plant from federal land. Section 9 also prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in non-federal areas in knowing violation of any state law or in the course of criminal trespass. Candidate species and species that are proposed or under petition for listing receive no protection under Section 9 of the FESA.

Section 10 of the FESA requires the issuance of an “incidental take” permit before any public or private action may be taken that would potentially harm, harass, injure, kill, capture, collect, or otherwise hurt (i.e., take) any individual of an endangered or threatened species. To offset the take of individuals that may occur incidental to implementation of the project, the permit requires

⁶ “Take,” as defined in Section 9 of the FESA, is broadly defined to include intentional or accidental “harassment” or “harm” to wildlife. “Harass” is further defined by the U.S. Fish and Wildlife Service as an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns that include, but are not limited to, breeding, feeding, and sheltering. “Harm” is defined as an act that actually kills or injures wildlife. This may include significant habitat modification or degradation that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

preparation and implementation of a habitat conservation plan that provides for the overall preservation of the affected species through specific mitigation measures.

Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 USC, Section 703, Supplement I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and egg. As authorized by the Migratory Bird Treaty Act, the USFWS may issue permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, educational, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal.

Federal Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) is the principal Federal legislation that guides marine mammal species protection and conservation policy. The MMPA delegates authority for oceanic marine mammals to the Secretary of Commerce, the parent agency of the National Oceanic and Atmospheric Administration (NOAA). Species of the order Cetacea (whales and dolphins) and species, other than walrus, of the order Carnivora, suborder Pinnipedia (seals and sea lions), are the responsibility of NOAA Fisheries (or NMFS). The Department of the Interior's Fish and Wildlife Service is responsible for the sea otter. Marine mammals that are already managed under international agreements are exempt as long as the agreements further the purposes of the MMPA.

The MMPA prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S.

Magnuson-Stevens Fishery Conservation and Management Act and Federal Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) of 1976 applies to fisheries resources and fishing activities in federal waters, which extend to 200 miles offshore. Conservation and management of U.S. fisheries, development of domestic fisheries, and phasing out of foreign fishing activities are the main objectives of the legislation. When the MSFCMA was amended in 1996 to include habitat conservation issues, the designation of "Essential Fish Habitat" (EFH) was created. EFH is broadly defined by the MSFCMA as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity."

The Sustainable Fisheries Act of 1996 (Public Law 104-297) amended the MSFCMA to establish new requirements for Essential Fish Habitat (EFH) descriptions in federal Fisheries Management Plans (FMPs), and to require federal agencies to consult with the National Marine Fisheries Service (NMFS) on activities that may adversely affect EFH. The Magnuson-Stevens Act requires all fishery management councils to amend their FMPs to describe and identify EFH for each managed fishery. The Act also requires consultation for all federal agency actions that may adversely affect EFH, including direct and indirect effects. It does not distinguish between actions

in EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside of EFH, such as upstream and upslope activities that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by federal agencies undertaking, permitting, or funding activities that may adversely affect EFH, regardless of the activity's location. Under section 305(b)(4) of the MSFCMA, NMFS is required to provide EFH conservation and enhancement recommendations to federal and state agencies for actions that adversely affect EFH. However, state agencies and private parties are not required to consult with NMFS unless state or private actions require a federal permit or receive federal funding. Although the concept of EFH is similar to that of critical habitat under the FESA, measures recommended to protect EFH by NMFS are advisory, not proscriptive.

Long Term Management Strategy Management Plan for Dredging in San Francisco Bay

The Long Term Management Strategy (LTMS) Management Plan for maintenance dredging of navigation channels in San Francisco Bay, as established in 2001, provides for a cooperative approach to sediment management in the San Francisco Bay-Delta. It represents a cooperative program among the U.S. EPA, Corps, RWQCB, BCDC, and regional stakeholders, including NMFS, CDFW, area environmental organizations, and water-related industries. The LTMS facilitates the economical and environmentally responsible maintenance of critical and needed navigation channels in the Bay-Delta and the environmentally responsible disposal of dredged material. It maximizes the use of dredged material as a beneficial resource, and establishes a cooperative permitting framework for dredging, dredged material disposal, and development of beneficial reuse site for dredge material. A key component of the LTMS is the establishment of construction work windows that include time periods when construction activities that have the potential to affect aquatic and terrestrial wildlife habitat and migration activity are allowed, restricted, or prohibited. Different restrictions and requirements are enforced depending on the affected species and time of year. If a project proponent wishes to construct during restricted periods, they must formally submit for consultation with the appropriate resource agencies (NMFS, USFWS, and CDFW). Through formal consultation specific measures must be implemented to avoid or reduce potential impacts.

Table 4.B-1 presents LTMS established dredging work windows for the San Francisco Bay-Delta.

Typical LTMS best management practices (BMPs) often required of in-water work in San Francisco Bay include, but are not limited to:

- the use of impermeable silt curtains to contain sediments within a limited area until it resettles;
- the use of gunderbooms;⁷
- operational controls for mechanical and hydraulic dredges to limit the amount of sediment released while dredging.

⁷ A gunderboom is similar to a silt curtain but is made of permeable material that allows water to flow through but traps sediment within the curtain.

**TABLE 4.B-1
ENVIRONMENTAL WORK WINDOWS FOR MAINTENANCE DREDGING ACTIVITIES ESTABLISHED
IN THE LONG TERM MANAGEMENT STRATEGY FOR SAN FRANCISCO BAY**

Species	Applicable Bay Region/Location	Authorized Work Windows
Steelhead trout	Central San Francisco Bay, Bay Bridge to Sherman Island	June 1 to November 30
Chinook salmon	Bay Bridge to Sherman Island (juveniles); Pinole Shoal, Suisun Bay Channel (adults)	June 1 to November 30
Coho salmon	Marin County waters from the Golden Gate to Richmond-San Rafael Bridge	June 1 to October 31
Pacific herring	Central San Francisco Bay, Richardson Bay, North and South Bay	March 1 to November 30
Longfin smelt	Delta to South San Francisco Bay	June 1 to October 31
California least tern	Berkeley Marina to San Lorenzo Creek within 1 mile of the coastline	August 1-March 15
California brown pelican	Within 300 feet of known roost site	October 1 to June 30

SOURCE: LTMS 2004; Robinson and Greenfield 2011.

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFW has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code Section 2070). CDFW also maintains a list of “candidate species,” which are species formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. In addition, CDFW maintains lists of “species of special concern,” which serve as “watch lists.” Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present on the project site and determine whether the proposed project could have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may affect a candidate species.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed CDFG to carry out the legislature’s intent to “preserve, protect, and enhance endangered plants in this state.” The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. The California Endangered Species Act expanded upon the original NPPA and enhanced legal protection for plants. The CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, there are three listing categories for plants in California: rare, threatened, and endangered.

California Fish and Game Code

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any

regulation made pursuant thereto. Section 3503.5 of the California Fish and Game Code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs.

The State Fish and Game Code Section 4150 states that all non-game mammals or parts thereof may not be taken or possessed except as otherwise provided in the code or in accordance with regulations adopted by the commission. This Section applies to all bat species.

The California Fish and Game Code (Sections 3511-birds, 4700-mammals, 5050-reptiles and amphibians, and 5515-fish) also allows the designation of a species as Fully Protected. This designation provides a greater level of protection than is afforded by the California Endangered Species Act, since it means the designated species cannot be taken at any time.

Special-Status Natural Communities

Sensitive natural communities are designated as such by various resource agencies, such as the CDFW, or in local policies and regulations, and are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent or distribution, and are considered threatened enough to warrant some sort of protection. For example, many local agencies in California consider protection of oak woodlands important, and federal, state, and most local agencies also consider wetlands and riparian habitat as sensitive communities. CDFW tracks communities it believes to be of conservation concern through its List of California Terrestrial Communities and the CNDDDB, and these communities are typically considered special-status for the purposes of CEQA analysis. Due to the developed nature of the project site and as described above, there are no terrestrial sensitive or special-status natural communities on the project site.

Jurisdictional Waters (Including Wetlands)

Rivers and Harbors Act. The objective of the Rivers and Harbors Act of 1899 is to prevent interferences with navigation, by barring unpermitted discharges of refuse into navigable waters.

Section 10 of the Rivers and Harbors Act appoints the Army Corps of Engineers (Corps) to regulate the construction of structures in, over, or under, excavation of material from, or deposition of material into “navigable waters.” In tidal areas, the limit of navigable water is the mean high tide line; in non-tidal waters it is the ordinary high water mark (OHWM). Larger streams, rivers, lakes, bays, and oceans are examples of navigable waters regulated under Section 10 of the Rivers and Harbors Act.

Federal Clean Water Act. The objective of the Clean Water Act (CWA) (33 U.S.C. §§ 1251 et seq) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

Section 404 of the CWA regulates activities that involve a discharge of dredged or fill material into waters of the United States. The Corps is responsible for issuing permits for discharges covered by Section 404, including most notably the filling of wetlands. The Corps emphasizes

avoiding and minimizing impacts to wetlands where feasible. When impacts to wetlands cannot be avoided, compensatory mitigation is generally required as part of the Section 404 permit process to ensure there is no net loss of wetlands values and functions.

Section 401 of the CWA is administered by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards. Under Section 401, an applicant for a federal permit, such as a Section 404 permit to discharge dredged or fill material into waters of the United States, must obtain a “water quality certification” from the appropriate state agency stating that the permitted activity is consistent with the state’s water quality standards. The San Francisco Bay Regional Water Quality Control Board (RWQCB) is the appointed authority for Section 401 compliance in the Bay Area.

The CWA defines wetlands as, “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions”. Wetlands under the CWA must therefore meet a three parameter test, which includes the presence of wetland hydrology, hydrophytic⁸ vegetation, and hydric soils.

State Policies and Regulations

State regulation of activities in waters and wetlands resides primarily with CDFW and the State Water Resources Control Board (SWRCB). CDFW provides comments on Corps permit actions under the Fish and Wildlife Coordination Act. CDFW is also authorized under the California Fish and Game Code, Sections 1600-1616, to enter into a Streambed Alteration Agreement with applicants and to develop mitigation measures when a proposed project would obstruct the flow or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams. The SWRCB, acting through the nine Regional Water Quality Control Boards, must certify that a Corps permit action meets state water quality objectives (Section 401, Clean Water Act) and also regulates Water of the State by authority of the Porter-Cologne Water Quality Control Act.

California agencies have adopted the Cowardin classification system to define wetlands. While the federal definition of wetlands requires three wetland identification parameters to be met, the Cowardin definition can be satisfied under some circumstances with the presence of only one parameter. Thus, identification of wetlands by State agencies may include areas that are permanently or periodically inundated or saturated and without wetland vegetation or soils, such as rocky shores, or areas that presume wetland hydrology based on the presence of at least one of the following: a) a seasonal or perennial dominance by hydrophytes *or* b) the presence of hydric soils.

Bay Conservation and Development Commission and San Francisco Bay Plan

The Bay Conservation and Development Commission (BCDC) is authorized by the McAteer Petris Act of 1965 to analyze, plan, and regulate San Francisco Bay and its shoreline. BCDC implements the San Francisco Bay Plan and regulates filling and dredging in the bay, its sloughs

⁸ A *hydrophyte* is, literally, a water-loving plant, i.e., one that is adapted to growing in conditions where the soil lacks oxygen, at least periodically during the year, due to saturation with water.

and marshes, and certain creeks and their tributaries. BCDC jurisdiction includes the waters of San Francisco Bay as well as a shoreline band that extends inland 100 feet from the high tide line. Any fill, excavation of material, or substantial change in use within BCDC jurisdiction requires a permit from BCDC. Portions of the project area lie within the jurisdiction of BCDC, as discussed in more detail in Section 4.A, Land Use. BCDC Permit eligibility and conditions of permit issuance are largely governed by the San Francisco Bay Plan (Bay Plan), completed and adopted by BCDC in 1968 and amended regularly since then. The Bay Plan contains findings and policies related to fish and wildlife, water quality, fill, recreation, public access, and the appearance and design of shorelines, as well as procedures for BCDC control of filling, dredging, and shoreline development. In addition to compliance and coordination with other federal and state regulations and policies discussed in this section, Bay Plan policies are also aligned with USACE's Long Term Management Strategy (LTMS) and are focused "to assure the benefits of fish, other aquatic organisms and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored and increased."

Local Plans and Policies

City of Alameda General Plan

The City of Alameda General Plan identifies several Guiding Policies, as well as several implementing policies, that pertain to Open Space for the preservation of natural resources. In relation to the proposed project, it is important to consider the following policies:

- Policy 5.1.a** Preserve and enhance all wetlands and water-related habitat.
- Policy 5.1.e** Continue to preserve and maintain all lagoons as habitat as well as visual and compatible-use recreational resources.
- Policy 5.2.a** Protect and preserve Bay waters and vegetation as nurseries and spawning grounds for fish and other aquatic species, both as part of habitat preservation and to encourage continued use of the Bay for commercial fishing production.

Implementing Policies

- Policy 5.1.bb** Require a biological assessment of any proposed project site where species or the habitat of species defined as sensitive or special status by the California Department of Fish and Game or the U.S. Fish and Wildlife Service might be present.
- Policy 5.1.dd** Develop and implement planting and herbicide, pesticide, and fertilizer application plans, including a pesticide drift control plan, for the golf course and public open space areas.

City of Alameda Master Street Tree Plan

The City of Alameda Master Street Tree Plan protects palm trees within the public right-of-way on Burbank Street and Portola Avenue, any street tree on Thompson and Central Avenues, and any coast live oak greater than 10 inches diameter at breast height (DBH). In addition, Chapter 23-3.2 of the City's municipal code applies to street trees in general and requires that the Public Works Director permit any planting, removal, trimming, pruning, or cutting of street trees.

City tree permits may specify the number, kind, and spacing for planting trees and shrubs and may limit the number of trees or shrubs to be removed or pruned and prescribe the methods to be used in any street tree or shrub removal.

Baylands Ecosystem Habitat Goals Project

The Baylands Ecosystem Habitat Goals Project (Goals Project) was established in June 1995 to establish a long-term vision for a healthy and sustainable baylands ecosystem. The final report, published in 1999 (Goals Project, 1999) enumerated a series of recommendations for habitat protection and restoration. Recommendations specific to Alameda Island include:

- Enhance and expand tidal and diked habitats at all potential areas throughout the segment, for example, on Alameda Island, on Bay Farm Island, and in the vicinity of the Oakland Airport.
- Protect and enhance the eelgrass bed near Bay Farm Island.
- Enhance and protect suitable habitat (e.g., barren or sparsely vegetated areas protected from predators) for snowy plover and least tern at Alameda Naval Air Station, Oakland Airport, Bay Farm Island, and other locations.
- Restore beach dune and marsh in the sanctuary on the southern end of Alameda Island.
- Increase habitat in and around San Leandro Bay for harbor seals and develop extensive and connected segments of tidal marsh for small mammals.
- Restore pockets of low-lying sand beaches in sheltered sites to support reintroduced colonies of California sea-blite.

Report recommendations are not binding but are generally consistent with the basic policies outlined in the City of Alameda General Plan and the specific terms and conditions of the project Biological Opinion (USFWS 2012). The Goals Project was recommended by the Governor's "California Wetlands Conservation Policy" and by the Comprehensive Conservation and Management Plan (CCMP) of the U.S. Environmental Protection Agency's San Francisco Estuary Project. It is also supported by most of the agencies and non-governmental groups with major planning, operational, or regulatory interests in Bay Area wetlands.

San Francisco Bay Subtidal Habitat Goals Project

Continuing with the Goals Project described above, in 2010 BCDC, the California Ocean Protection Council/California State Coastal Conservancy, the National Oceanographic and Atmospheric Administration (NOAA), and the San Francisco Estuary Partnership, in collaboration with each other and the broader scientific community, managers, restoration practitioners, and stakeholders, published a report containing restoration planning goals and guidelines for the subtidal areas and habitats of the San Francisco Bay-Delta (Subtidal Goals Project, 2010b). The San Francisco Bay Subtidal Habitat Goals Project takes a Baywide approach in setting science-based goals for maintaining a healthy, productive, and resilient ecosystem. Where possible, these subtidal goals are designed to connect with intertidal habitats and with goals developed by other projects, including goals for Baylands and uplands habitats. The goals and recommendations contained within the Subtidal Habitat Goals Project are not binding by regulation but rather are intended to serve as

guidance to local, state, and federal agencies when evaluating projects and their potential ecological effects, and when issuing permits. Though currently neither a policy nor regulatory document, this report offers guidance on opportunities or subtidal restoration and protection. Implementation will occur through a number of avenues such as local governments incorporating these recommendations into their planning processes and documents and regulatory agencies using this report to evaluate, revise, or implement their policies.

Subtidal habitat consists of all the submerged area beneath the Bay water's surface and includes mud, shell, sand, rocks, artificial structures, shellfish beds, submerged aquatic vegetation, macroalgal beds, and the water column above the bay bottom. Submerged habitats are important for threatened species such as green sturgeon and Chinook salmon, commercial species like Dungeness crab and Pacific herring, and a host of other fish, shrimp, crabs, migratory waterfowl, and marine mammals.

The principal habitat conservation goals included in the Subtidal Habitat Goals Report that apply to the proposed project include:

Soft Substrate

- Promote no net increase to disturbance to San Francisco Bay soft bottom habitat
- Promote no net loss to San Francisco Bay subtidal and intertidal sand habitats

Rock Habitats

- Promote no net loss of natural intertidal and subtidal rock habitats in San Francisco Bay

Artificial Structures

- Enhance and protect habitat function and the historical value of artificial structures in San Francisco Bay
- Improve San Francisco Bay subtidal habitats by minimizing placement of artificial structures that are detrimental to subtidal habitat function

Shellfish Beds

- Protect San Francisco Bay native shellfish habitats (particularly the native oyster *Ostrea lurida*) through no net loss to existing habitats

Submerged Aquatic Vegetation

- Protect existing eelgrass habitat in San Francisco Bay through no net loss to existing beds

B.4 Impacts and Mitigation Measures

Significance Criteria

For the purposes of this analysis, this EIR uses the criteria presented in Appendix G of the CEQA Guidelines to determine impact significance. Significant impacts would occur if the proposed project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act or on Waters of the State through direct removal, filling, hydrological interruption, or other means;
- Interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with any adopted local, regional, or State Habitat Conservation Plan.

CEQA Section 15380 further provides that a plant or animal species may be treated as “rare or endangered” even if not on one of the official lists if, for example, it is likely to become endangered in the foreseeable future.

Approach to Analysis

Project components were evaluated using the above significance criteria. For purposes of this EIR, three principal components of the guidelines outlined above were considered:

- Magnitude of the impact (e.g., substantial/not substantial),
- Uniqueness of the affected resource (rarity), and
- Susceptibility of the affected resource to perturbation (sensitivity).

The evaluation of significance must consider the interrelationship of these three components. For example, a relatively small magnitude impact to a state or federally listed species would be considered significant because the species is very rare and is believed to be very susceptible to disturbance. Conversely, a plant community such as California annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be required to result in a significant impact. Impacts are generally considered less than significant if the habitats and species affected are common and widespread in the region and the state. Impacts are considered beneficial if the action causes no detrimental impacts and results in an increase of habitat quantity and quality.

Northern Waterfront GPA EIR

The GPA EIR concluded that the Northern Waterfront GPA would result in potentially significant impacts to bat roost sites. The GPA EIR also concluded that sediment dredging and in-water construction activities in the Alaska Basin could result in potentially significant impacts to fish,

aquatic bird species, and other aquatic organisms. Since the GPA EIR was a programmatic analysis, projects proposed within the Northern Waterfront GPA are subject to a project-level review for biological impacts, which is included below. The EIR also prescribed two biological resources mitigation measures that would be applicable to the proposed project:

GPA EIR Mitigation Measure BIO-1 requires a pre-construction survey of all buildings scheduled for demolition or renovation, to identify, avoid and protect possible bat roosting sites, would apply to the proposed project and has been revised to reflect new and current information.

GPA EIR Mitigation Measure BIO-2 requires dredging activities to be consistent with the Long-Term Management Strategy⁹ program in order to avoid and minimize impacts on jurisdictional waters would apply to the project.

This analysis below further identifies **Mitigation Measures 4-1a through 4-1e** (avoid and minimize impacts on special-status wildlife), **Mitigation Measures 4-2a through 4-2c** (avoid and minimize impacts to sensitive natural communities), and **Mitigation Measure 4-3** (avoid and minimize impacts to migratory and breeding wildlife). With implementation of **GPA EIR Mitigation Measures BIO-1, BIO-2, and Mitigation Measures 4-1a through 4-1e, 4-2a through 4-2c, and 4-3** as described below, the proposed project would have less than significant impacts to the City's biological resources, which is consistent with the GPA EIR. Therefore, the proposed project would not result in any new potentially significant biological resources effects that were not identified in the GPA EIR or a substantial increase the severity of any previously identified significant biological resources effects.

Impact Analysis

Impact 4.B-1: The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the United States Fish and Wildlife Service. (Less than Significant with Mitigation)

Sensitive aquatic communities, special-status fish, and marine mammals that occur in Alaska Basin and the Oakland-Alameda Estuary could be adversely impacted by project activities requiring in-water work associated with rehabilitation of pilings and construction of the new marina. In addition, special-status and migratory bird and bat species have the potential to occur at or in the vicinity of the project site and could be adversely impacted by construction activities associated with the demolition of existing buildings which could disrupt occupied avian nests and/or bat roosts.

Special Status Fish and Marine Mammals

The San Francisco Bay waters surrounding Alameda Island are identified as critical habitat for central coast steelhead trout and green sturgeon. The State threatened longfin smelt can also be

⁹ Refers to the Long-Term Management Strategy program developed by the Bay Conservation and Development Commission (BCDC), Regional Water Quality Control Board (RWQCB), and the U.S. Environmental Protection Agency (EPA), among other agencies.

found in these waters, most commonly in the winter months (Robinson and Greenfield 2011). These areas are also listed as essential fish habitat for Fishery Management Plan-managed fish taxa and contain spawning and foraging habitat for Pacific herring. Pacific harbor seals and California sea lions may occasionally occur in project area waters through most of the year. The proposed project may require in-water work to rehabilitate, replace or possibly remove some portions of existing wharf pilings in order to construct a new marina and future water shuttle facilities in Alaska Basin and the Oakland-Alameda Estuary.

The potential effects of construction activities on marine biota would range from short-term to permanent, depending on the extent and degree of disturbance, and would be expected to result in possible mortality, physical injury, or physiological stress, resulting from habitat loss, increased sedimentation and turbidity, increased exposure to organic and inorganic contaminants in stormwater runoff, and construction and operational noise. Marina and water shuttle operations would have the potential for impacts on marine resources associated mainly with initial and maintenance dredging, if needed, periodic in-water repairs, and proper management of boat-related fuels and wastes. In addition, these facilities would result in localized shading of Bay waters, though some or all of the new localized shading could be offset by removal of existing wharf structures in other parts of the site. Any associated impacts on water quality and marine habitats would have the potential to affect special status species present in the project area. A new marina would also increase boat traffic in project area waters.

Pilings may be required for new building construction, for construction of the marina and replacement or rehabilitation or partial removal of existing decaying wharf pilings. Concrete, wood, and steel piles that are driven within the water column can produce high-intensity noise and result in damage to soft tissues, such as gas bladders or eyes (barotraumas), and/or harassment of fish and marine mammals such that they alter swimming, sleeping, or foraging behavior or temporarily abandon forage habitat. Protected and managed fish species, including salmon, steelhead, Pacific herring, anchovies, mackerel, sardine, soles, sanddab, green sturgeon, and other bottom fish, as well as harbor seals and, occasionally, California sea lions use, or may use, the project area waters for foraging and/or as a transit corridor and would be potentially affected by the noise from pile driving.

Mitigation Measure 4.B-1a outlines protocols for reducing noise impacts to sensitive fish species that were not fully defined the GPA EIR. By limiting impact hammer pile driving to time periods when most sensitive fish species are not present and by employing BMPs demonstrated to reduce noise levels to safe levels for fish, Mitigation Measure 4-1a would ensure effects of the proposed project would be less than significant. The Oakland-Alameda Estuary and Alaska Basin waters could be used by harbor seals and sea lions for foraging and thus, there is a potential for noise from proposed pile driving activities to significantly affect these marine mammals.

Mitigation Measure 4.B-1a, 4.B-1b, and 4.B-1c outline protocols for reducing noise impacts to sensitive marine mammals that were not fully defined in the GPA EIR. Implementation of noise reduction measures to protect fish and marine mammals in **Mitigation Measures 4.B-1a, 4.B-1b, and 4.B-1c**, which are consistent with NMFS current programmatic review for pile driving activities in San Francisco Bay (NMFS 2007a and b), would reduce the impacts to a less than significant level.

Mitigation Measure 4.B-1a: Prior to the start of wharf rehabilitation and marina and water shuttle facilities construction or new building construction that would require pile driving, the City shall require a NMFS-approved sound attenuation monitoring plan to protect fish and marine mammals, if pile driving is required for project implementation. This plan shall provide detail on the sound attenuation system, detail methods used to monitor and verify sound levels during pile driving activities, and describe management practices to be taken to reduce impact hammer pile-driving sound in the marine environment to an intensity level of less than 183 dB. The sound monitoring results shall be made available to the NMFS. The plan shall incorporate, but not be limited to, the following best management practices (BMPs):

- To the extent feasible, all pilings shall be installed and removed with vibratory pile drivers only. Vibratory pile driving will be conducted following the Corps' *"Proposed Procedures for Permitting Projects that will Not Adversely Affect Selected Listed Species in California"*. USFWS and NOAA completed Section 7 consultation on this document, which establishes general procedures for minimizing impacts to natural resources associated with projects in or adjacent to jurisdictional waters
- An impact pile driver may only be used where necessary to complete installation of larger steel pilings in accordance with seismic safety or other engineering criteria
- The hammer shall be cushioned using a 12-inch thick wood cushion block during all impact hammer pile driving operations
- All piling installation using impact hammers shall be conducted between June 1 and November 30, when the likelihood of sensitive fish species being present in the work area is minimal
- If pile installation using impact hammers must occur at times other than the approved work window, the project applicant shall obtain incidental take authorization from NMFS and CDFW, as necessary, to address potential impacts on steelhead trout, chinook salmon, and Pacific herring and implement all requested actions to avoid impacts
- The project applicant shall monitor and verify sound levels during pile driving activities. The sound monitoring results will be made available to NMFS and the City
- In the event that exceedance of noise thresholds established and approved by NMFS occurs, a contingency plan involving the use of bubble curtains or air barrier shall be implemented to attenuate sound levels to below thresholds

Mitigation Measure 4.B-1b: During the project permitting phase, any projects requiring in-water work will either proceed under one of the programmatic consultations for federally listed species described above or a project-level BO would be required. Alternatively, the project will obtain Incidental Harassment Authorization for marine mammals for dredging or pile driving activities. The project applicant shall also consult with CDFW regarding project impacts on State listed special-status fish species and the potential need for an incidental take permit (ITP). The project applicant shall submit to the City copies of any IHA and/or ITP received or, alternatively, copies of correspondence confirming that an IHA and/or ITP is not required for the project in question.

Mitigation Measure 4.B-1c: As part of the NMFS-approved sound attenuation monitoring plan required for pile driving in Mitigation Measure 4-2a, the City shall ensure that the project applicant implements these additional actions to reduce the effect of underwater noise transmission on marine mammals. These actions shall include at a minimum:

- Establishment of a 1,600-foot (500-meter) safety zone that shall be maintained around the sound source, for the protection of marine mammals in the event that sound levels are unknown or cannot be adequately predicted
- Work activities shall be halted when a marine mammal enters the 1,600-foot (500-meter) safety zone and resume only after the animal has been gone from the area for a minimum of 15 minutes
- A “soft start” technique shall be employed in all pile driving to give marine mammals an opportunity to vacate the area
- Maintain sound levels below 90 dBA when pinnipeds (seals and sea lions) are present
- A NMFS-approved biological monitor will conduct daily surveys before and during impact hammer pile driving to inspect the work zone and adjacent Bay waters for marine mammals. The monitor will be present as specified by NMFS during the impact pile-driving phases of construction

Operational Impacts

The installation of a marina would shade subtidal habitat. Overwater structures can alter the physical ecological conditions present under them, including increasing the deposition of sediments and thereby reducing water depth and the grain size composition of seafloor sediments and therein the composition of benthic infaunal communities, and reducing the penetration of ambient light into Bay waters (TRAC 2001). Decreased light penetration into Bay waters can have an effect on phytoplankton production and the presence and growth of marine algae, including eelgrass. Shade cast from docks, piers, and pilings has been shown to reduce the amount of ambient light within the marine environment, affect invertebrate and vertebrate community composition, and create behavioral barriers that can deflect or delay fish migration, reduce fish prey forage, and alter predator-prey relationships over normal open-water conditions (*ibid.*). However, as discussed above, Bay waters are typically relatively turbid, which naturally limits ambient light penetration and phytoplankton production. In addition, although it is known that birds forage in the Oakland-Alameda Estuary and Alaska Basin, the composition of the marine community there and its productivity and importance to foraging birds are unknown. With the abundance of similar or better habitat available in adjacent waters, the potential effects of shading associated with the proposed marina and water shuttle facility on sensitive species are expected to be less than significant.

Increased artificial illumination of Bay waters at night can alter normal swimming and foraging behavior of fish, marine mammals, and seabirds. Many pelagic schooling fish, such as sardines and herring, are attracted to illumination cast by boats and offshore structures and are frequently subject to increased predation from other fish species as well as marine birds and occasional marine mammals (*ibid.*). Measures that are often used to minimize impacts of artificial night lighting on birds, fish, and marine mammals include installation of dock lighting that is low to the dock surface; uses low-voltage, sodium, or non yellow-red spectrum lights; and is well shielded to restrict the transmittance of artificial light over the water. The potential for impacts on special-status species from artificial night lighting on marina and future water shuttle facilities would be potentially significant. **Mitigation Measure 4.B-1d**, outlines protocols for minimizing direct artificial lighting of Bay waters that were not fully defined in the GPA EIR. By using shielded, low-

mounted, and low light-intensity fixtures and bulbs, implementation of **Mitigation Measure 4.B-1d** would reduce impacts to a less than significant level.

Mitigation Measure 4.B-1d: Through the Design Review application process, the City shall ensure that the project applicant installs dock lighting on all floating docks that minimizes artificial lighting of Bay waters by using shielded, low-mounted, and low light-intensity fixtures and bulbs.

Nesting Birds

During the September 16, 2013 reconnaissance survey, multiple large stick nests were observed in the rafters of the large pavilion-style former warehouse within the project site. In addition, significant bird sign was observed on the pavement below these rafters indicating previous nesting activity. Construction disturbance from building demolition or vegetation and tree removal during breeding bird season in support of the proposed project could result in incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment of active nests within project structures or in trees of buildings in the vicinity of the proposed project site. **Mitigation Measure 4.B-1e** outlines protocols for construction bird surveys that were not fully defined the GPA EIR. With implementation of **Mitigation Measure 4.B-1e** the effects of the proposed project would be less than significant.

The general raptor and passerine bird nesting period cited by CDFW is often cautiously interpreted as the period between February 1 and August 31. Breeding birds are protected under Section 3503 of the California Fish and Game Code (Code), and raptors are protected under Section 3503.5. In addition, both Section 3513 of the Code and the Federal Migratory Bird Treaty Act (16 USC, Sec. 703 Supp. I, 1989) prohibit the killing, possession, or trading of migratory birds. Finally, Section 3800 of the Code prohibits the taking of non-game birds, which are defined as birds occurring naturally in California that are neither game birds nor fully protected species.

In general, CDFW recommends a 250-foot construction exclusion zone around the nests of active passerine songbirds during the breeding season, and a 500-foot buffer for nesting raptors. These buffer distances are considered initial starting distances once a nest has been identified, and are sometimes revised downward to 100 feet and 250 feet, respectively, based on site conditions and the nature of the work being performed. These buffer distances may also be modified if obstacles such as buildings or trees obscure the construction area from active bird nests, or existing disturbances create an ambient background disturbance similar to the proposed disturbance.

Mitigation Measure 4.B-1e: To the extent practicable, construction activities including building renovation, demolition, vegetation and tree removal, and new site construction shall be performed between September 1 and January 31 in order to avoid breeding and nesting season for birds. If these activities cannot be performed during this period, preconstruction survey for nesting birds shall be conducted by a qualified biologist.

In coordination with the City, surveys shall be performed during breeding bird season (February 1 – August 31) no more than 14 days prior to construction activities listed above in order to locate any active passerine nests within 250 feet of the project site and any active raptor nests within 500 feet of the project site. Building renovation, tree and

vegetation removal, and new construction activities performed between September 1 and January 31 avoid the general nesting period for birds and therefore would not require pre-construction surveys.

If active nests are found on either the project site or within the 500-foot survey buffer surrounding the project site, no-work buffer zones shall be established around the nests in coordination with CDFW. No demolition, vegetation removal, or ground-disturbing activities shall occur within a buffer zone until young have fledged or the nest is otherwise abandoned as determined by the qualified biologist. If work during the nesting season stops for 14 days or more and then resumes, then nesting bird surveys shall be repeated, to ensure that no new birds have begun nesting in the area.

Fish-Eating Birds

California least tern, California brown pelican, osprey, three species of cormorant, several gull species, grebes, and multiple duck species forage in the Oakland-Alameda Estuary. Dredging that causes significant turbidity could result in decreased foraging and reproductive success for foraging bird species (USFWS 2006). Similarly, pile driving would also result in temporary increases in turbidity, which could affect the abundance of prey as fish avoid the area due to in-water disturbance and could interfere with the bird's ability to locate prey, resulting in the same types of impacts as described above for dredging. According to the 2001 *Long-Term Management (LTMS) Strategy for the Placement of Dredged Material in the San Francisco Bay Region Management Plan*, foraging birds like the California least tern may be affected by turbidity from dredging in coastal waters and sloughs within one mile of the coastline from Berkeley Marina south through San Lorenzo Creek (Corps 2001). As shown in Table 4-1, the LTMS specifies that dredging activities within this potential impact area should not occur during the period in which (and just prior to which) least terns might be nesting in the San Francisco Bay area (March 16–July 31). Because the proposed project and associated in-water components are located within this area where potential foraging effects may occur, the project applicant would be required by Section 10 and/or Section 404 permitting conditions to limit dredging to occur outside of this sensitive period.

With respect to pile driving activities associated with in-water work, **Mitigation Measures 4.B-1a** and **4.B-1b** would minimize potential impacts on fish and, consequently, the foraging birds that depend on them. The waters of the Oakland-Alameda Estuary and Alameda Basin are not a primary foraging area for least tern, therefore temporary loss of these waters due to in-air noise and increased activity associated with pile driving would be less-than-significant.

Roosting Bats

The proposed project has the potential to affect special-status and common roosting bat species, including the Townsend's big-eared bat, during demolition of the existing warehouse buildings in support of project development. Bats have the potential to roost in existing vacant or underutilized buildings, other man-made structures, and trees within or near the project site. Bats and other non-game mammals are protected in California under the State Fish and Game Code. The **GPA EIR Mitigation Measure BIO-1** has been expanded upon, as described below.

Maternity roosts are those that are occupied by pregnant females or females with non-flying young. Non-breeding roosts are day roosts without pregnant females or non-flying young. Destruction of an occupied, non-breeding bat roost, resulting in the death of bats; disturbance that causes the loss of a maternity colony of bats (resulting in the death of young); or destruction of hibernacula¹⁰ are prohibited under the Fish and Game Code and would be considered a significant impact (although hibernacula are generally not formed by bat species in the Bay Area due to sufficiently high temperatures year round). This may occur due to direct or indirect disturbances. Direct disturbance includes building removal, tree removal, or roost destruction by any other means. Indirect disturbance to bat species could result in behavioral alterations due to construction-associated noise or vibration, or increased human activity in the area. The proposed project would involve demolition of existing structures prior to construction. Prior to the issuance of construction permits for development facilitated under the proposed project, the City shall ensure the project applicant implements the following measures protective of special-status bats which would reduce the impacts to a less-than-significant level. This is the same finding as the proposed project in the GPA EIR, however, Mitigation Measure BIO-1 is revised and expanded upon to add more project level detail to the mitigation measure and to be consistent with updated standard practices. The effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

GPA EIR Mitigation Measure BIO-1 (revised): Proponents of each project in the Northern Waterfront GPA area shall engage a qualified biologist to prepare conduct a preconstruction survey of the project area in order to locate potential roosting bat habitat and active colonies of all buildings scheduled for demolition or renovation shall be conducted no more than two weeks in advance of initiation of building demolition or renovation activities onsite or initiation of construction within 100 feet of structures providing potential bat roosting sites. Potential direct and indirect disturbances to bats shall be identified by locating potential habitat and active colonies and instituting protective measures prior to construction. No activities that could disturb active roosts shall proceed prior to the completed surveys. 30 days prior to the initiation of demolition or renovation activities. Special attention shall be given to buildings where pallid bats were observed during the earlier survey or where measures to discourage roosting were implemented. If no bats or signs of an active roost are found, no additional measures are required. If a bat roost site is found, then measures shall be implemented to discourage roosting at the site. If a maternity colony of bats is found, the building and the bats shall not be disturbed until the young have dispersed, as determined by a qualified biologist.

Should potential roosting habitat or active bat roosts be found in structures to be disturbed (i.e. demolished or renovated) under the project, the following measures shall be implemented:

- Removal of structures shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 15 – August 31); and outside of months of winter torpor (approximately October 15 – February 28), to the extent feasible.
- If removal of structures during the periods when bats are active is not feasible and active bat roosts being used for maternity or hibernation purposes are found on or in

¹⁰ Hibernaculum refers to the winter quarters of a hibernating animal.

the immediate vicinity of the project site where structure demolition or renovation is planned, a no-disturbance buffer of 100 feet shall be established around the roost sites until they are determined to be no longer active by a qualified biologist.

- The qualified biologist shall be present during structure disturbance if active bat roosts are present. Structures with active roosts shall be removed only when no rain is occurring or is forecast to occur for three days and when daytime temperatures are at least 50°F.
- Removal of structures containing or suspected to contain active bat roosts shall be dismantled under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost.
- Bat roosts that begin during construction are presumed to be unaffected, and no buffer would be necessary.

If significant bat roosting habitat (e.g., maternity roosts or large non-maternity roost sites) is destroyed during structure removal, artificial bat roosts shall be constructed in an undisturbed area in the project site vicinity away from human activity and at least 200 feet from project demolition/construction activities. The design and location of the artificial bat roost(s) shall be determined by a qualified bat biologist.

In summary, the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Significance after Mitigation: Less than Significant.

Impact 4.B-2: Development facilitated by the proposed project would not have a substantial adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Less than Significant with Mitigation)

There is no riparian habitat located within the Encinal Terminals project area; however, sensitive natural communities are present in the vicinity of the proposed project that could be adversely impacted by project development. Critical habitat for green sturgeon and Central California coast steelhead is designated in San Francisco Bay and the Oakland-Alameda Estuary and includes the waters adjacent to the project area. Additionally, essential fish habitat (EFH) is present in study area waters for Pacific groundfish, coastal pelagics, and Pacific Coast salmon. Sensitive natural communities including eelgrass and native oyster beds are not known to exist within the project area but are present in the San Francisco Bay within two miles of the project location. Eelgrass beds in particular are designated as EFH for various federally-managed fish species within the Pacific Coast Groundfish and Pacific Coast Salmon Fisheries Management Plans (FMP). Eelgrass is also considered a habitat area of particular concern (HAPC) for various species within the Pacific Coast Groundfish FMP. An HAPC is a subset of EFH; these areas are rare, particularly susceptible to human-induced degradation, especially ecologically important, and/or located in an environmentally stressed area.

The waters off Alameda Island support multiple submerged aquatic vegetation beds including eelgrass beds as well as green, red, and brown marine algae attached to pier and wharf pilings, intertidal and shallow subtidal natural and artificial hard substrates (rock and concrete), and mud shoals. These marine aquatic vegetation beds provide essential fish habitat for Pacific herring and other fish species and act as important habitat and nursery areas for invertebrates such as shrimp and crabs (Merkel and Associates 2010). In addition, the native Olympia oyster can be found in the rocky intertidal and shallow subtidal zones of the Bay shorelines, as well as attached to pilings and other hard substrates. This species is making a significant recovery in the San Francisco Bay-Delta after being considered extinct following over-harvesting in the 1800s, predation by the non-native oyster drill, and pollution (Couch and Hassler, 1989).

Dredging and pile removal associated with rehabilitation or replacement of deteriorated wharf pilings could potentially affect submerged aquatic vegetation on the Bay floor or attached to wharf pilings, as well as affect native oysters or mussels. Potential effects from dredging and pile removal could range from short-term to permanent, depending on the extent and degree of disturbance, and would be expected to result in possible mortality, physical injury, or physiological stress resulting from reduction in habitat suitability, and physical disturbance/removal. Dredging and pile removal could result in direct mortality of native oysters. While eelgrass beds are not known to occur within the project area, their presence in the Oakland-Alameda Estuary, approximately two miles northwest of the project, may subject them to indirect disturbance from such in-water work. Any such impacts resulting in significant damage to eelgrass beds or native oyster beds would be potentially significant because eelgrass beds are considered to be of critical importance to Bay marine life and native oysters are still generally quite rare throughout the Bay.

Rehabilitation or removal of existing wharf pilings may remove some artificial habitat used to support submerged aquatic vegetation and native oysters, however their replacement by new pilings and structures, which could be recolonized, would render this potential impact less than significant.

The greatest potential threat to the sensitive aquatic communities off Alameda could be from boaters unfamiliar with San Francisco Bay's sensitive habitats, their locations, and the importance of protecting these habitats. In addition, in-water work and increases in recreational boaters could result in the introduction and/or spread of invasive marine species.

Potentially significant adverse impacts on these sensitive aquatic communities is a new finding for the proposed project that was not previously identified in the GPA EIR. These potentially significant impacts on eelgrass and oyster beds resulting from in-water work and recreational boaters would be reduced to less-than-significant levels through implementation of **Mitigation Measures 4.B-2a, 4.B-2b, and 4.B-2c.**

Mitigation Measure 4.B-2a: Prior to in-water work related to wharf retrofitting, the City shall ensure that the project applicant conducts a pre-construction survey to determine if native oysters, mussels, and eelgrass are present in Alaska Basin and the Oakland/Alameda Estuary to be affected by the project.

- The eelgrass survey shall be conducted according to the methods contained in the California Draft Eelgrass Mitigation Policy (CDEMP) (NMFS 2011), with the exception that the survey shall be conducted within 120 days (rather than 60 days, as recommended in the CDEMP) prior to the desired construction start date, to allow sufficient time for modification of project plans (if feasible) and agency consultation.
- If found within or immediately adjacent to the construction footprint, the project applicant shall first determine whether avoidance of the beds is feasible. If feasible, impacts to the oyster or eelgrass bed shall be avoided. If complete avoidance is not feasible, the applicant shall request guidance from the National Marine Fisheries Service (or other applicable agency) as to the need and/or feasibility to move affected beds. Any translocation of eelgrass beds shall be conducted consistent with the methods described in the CDEMP and/or those described in Eelgrass Conservation in San Francisco Bay: Opportunities and Constraints (Boyer and Wyllie-Echeverria, 2010). Translocation of oyster beds shall be consistent with methods and recommendations presented in Shellfish Conservation and Restoration in San Francisco Bay: Opportunities and Constraints (Zabin et al., 2010)
- If it is not possible to translocate oyster or eelgrass beds then the City shall ensure that the project applicant provides compensatory mitigation consistent with the CDEMP for eelgrass (a ratio of 3.01:1 [transplant area to impact area]) and a minimum 1:1 ratio for oyster beds.
- The relocation or compensatory mitigation site for eelgrass or oyster beds shall be within San Francisco Bay.

Mitigation Measure 4.B-2b: Prior to occupancy the City shall ensure that the marina project applicant prepares educational information regarding sensitive biological resources in the project vicinity and within Bay waters. This information shall be disseminated to all boaters using the marina and shall include, but not be limited to, information educating boat owner/operators about sensitive habitats and species in the Bay and actions they are required to implement to avoid impacts to marine resources.

The educational information will be disseminated to visiting boaters through multiple methods including, but not limited to, brochures or pamphlets; marina and/or City websites; boating, cruising, and newspaper periodicals; and social media. The information shall be prepared soliciting input from, and in cooperation with, the National Marine Fisheries Service (NMFS), U.S. Coast Guard (USCG), California State Lands Commission, National Park Service (NPS), California Department of Parks and Recreation (CDPR), Bay Conservation and Development Commission (BCDC), and local organizations active in protecting Bay marine resources, as appropriate.

Mitigation Measure 4.B-2c: The City shall require that the project applicant develop and implement a Marine Invasive Species Control Plan prior to commencement of any in-water work including, but not limited to, construction of wharves and seawalls, dredging, pile driving, and construction of new stormwater outfalls. The plan shall be prepared in consultation with the United States Coast Guard (USCG), RWQCB, and other relevant state agencies. Provisions of the plan shall include but not be limited to the following:

- Environmental training of construction personnel involved in in-water work
- Actions to be taken to prevent the release and spread of marine invasive species, especially algal species such as Undaria and Sargasso

- Procedures for the safe removal and disposal of any invasive taxa observed on the removed structures prior to disposal or reuse of pilings, docks, wave attenuators, and other features
- The onsite presence of qualified marine biologists to assist the contractor in the identification and proper handling of any invasive species on removed equipment or materials
- A post-construction report identifying which, if any, invasive species were discovered attached to equipment and materials following removal from the water, and describing the treatment/handling of identified invasive species. Reports shall be submitted to the City, as well as the USCG and the RWQCB if requested by the agencies.

Significance after Mitigation: Less than Significant.

Impact 4.B-3: Development facilitated by the proposed project would have a substantial adverse effect on federally protected wetlands, ‘other waters’, and navigable waters as defined by Sections 404 and 10 of the Clean Water Act and waters of the State through direct removal, filling, hydrological interruption, or other means. (Less than Significant with Mitigation)

The Oakland-Alameda Estuary and San Francisco Bay are considered navigable waters of the United States; therefore, they are “jurisdictional” waters regulated by the Army Corps of Engineers (Corps) under Section 10 of the Rivers and Harbors Act up to mean high water and Section 404 of the Clean Water Act (CWA) up to the mean high tide line. These waters are also regulated by the Regional Water Quality Control Board (RWQCB) as Waters of the State and by the San Francisco Bay Conservation and Development Commission (BCDC), which has jurisdiction over all areas of San Francisco Bay that are subject to tidal action, as well as a 100-foot shoreline band. No wetlands are present within the Encinal Terminals project area.

Improvements to the wharf structure included in the proposed project would result in in-water work which would be subject to the Rivers and Harbors Act of 1899, Clean Water Act (Sections 404 and 401). The project is also subject to BCDC’s McAteer Petris Act of 1965, which regulates dredging and filling of the Bay, and The Long Term Management Strategy (LTMS) Management Plan for maintenance dredging of navigation channels in San Francisco Bay. Established in 2001, the LTMS Management Plan provides for a collaborative approach to sediment management in the San Francisco Bay-Delta. It represents a cooperative program among the U.S. EPA, Corps, RWQCB, BCDC, and regional stakeholders, including NMFS, CDFW, area environmental organizations, and water-related industries. A key component of the LTMS is the establishment of construction work windows that include time periods when construction activities that have the potential to affect aquatic and terrestrial wildlife habitat and migration activity are allowed, restricted, or prohibited (see Table 1 in *Regulatory Framework*). If a project proponent wishes to construct during restricted periods, they must formally submit for consultation with the appropriate resource agencies (NMFS, USFWS, and CDFW). Through formal consultation specific measures must be implemented to avoid or reduce potential impacts.

Implementation of the proposed project includes construction of a new marina in Alaska Basin, facilities for a future water shuttle on the Oakland Alameda Estuary, and extensive improvements to existing wharf pilings that would require substantial dredging. Mammals and birds that feed on fish, including the California least tern, could be affected by dredging both directly through contact with equipment and indirectly through disturbance and dispersal of contaminated materials into the water during the period of active dredging and shortly thereafter. Sediments in the lagoon could be contaminated with heavy metals, PCBs, organic compounds, chlorinated compounds, or other industrial effluent.

Dredging and in-water construction activities would also increase turbidity of the water, reducing visibility for mammal and avian species hunting in these areas. Increased turbidity could also discourage prey fish from entering Alaska Basin from San Francisco Bay, thereby decreasing the supply of available fish during dredging and construction activities. Increased turbidity from dredging and in-water construction activities would be localized however, and limited in duration. The magnitude of the turbidity would depend in part on the number and type of dredges working at a given time, their locations, and measures implemented to reduce turbidity. Implementation of **GPA EIR Mitigation Measure BIO-2** would reduce impacts to a less-than-significant level:

GPA EIR Mitigation Measure BIO-2: All dredging and in-water construction activities shall be consistent with the standards and procedures set forth in the Long Term Management Strategy for dredging in the San Francisco Bay waters, a program developed by the Bay Conservation and Development Commission (BCDC), the Regional Water Quality Control Board (RWQCB), the U.S. Environmental Protection Agency, (EPA), and other agencies, to guide the disposal of dredge materials in an environmentally sound manner.

Significance after Mitigation: Less than Significant.

Impact 4.B-4: Development facilitated by the proposed project would not interfere with the movement of 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. (Less than Significant with Mitigation)

The proposed project has the potential to interfere substantially with the movement of native resident or migratory avian and bat species within the project vicinity as described in the GPA EIR and further evaluated in this analysis. In addition, the proposed project could adversely impact the movement of fish and marine mammals within project area waters. Implementation of Mitigation Measures BIO-1 and 4.B-1e, described under criterion “a”, above, in addition to **Mitigation Measure 4.B-3** would reduce these potential project-related impacts to a less-than-significant level.

Increased boat traffic resulting from construction of a new marina in Alaska Basin and potential water shuttle dock in the Oakland-Alameda Estuary could have a negative effect on “rafting” (i.e., aggregating on water) bird species. As discussed in criteria “a”, the open waters of the Oakland-

Alameda Estuary and San Francisco Bay are foraging habitats for many species of resident and migratory birds, and important nesting colonies for California least tern and western and California gulls are located at Alameda Point. Many waterfowl species are declining along the West Coast, and human impacts from the heavily urbanized San Francisco Bay Area are often detrimental to them. Rafting or foraging birds look, swim, dive, or fly away as watercraft approach them and become distracted from their normal activities (Huffman 1999). Increased vigilance and escape behavior reduces their limited energy supply and induces stress. Different species have varying distance tolerances before becoming disturbed, but if disturbed they can be flushed from foraging or resting areas. Diving ducks such as scaup and scoter are especially sensitive to maritime traffic. Long-term effects could be site abandonment, reduced migration, and reduced reproductive success (Belanger and Bedard 1990; Knapton et al. 2000; Mori et al. 2001).

In addition to migratory and resident waterbirds, in-water rehabilitation of wharf pilings, and construction and operation of the proposed marina and future water shuttle facility, have the potential to interfere with the movement or migratory corridors of, or impede the use of nursery sites by, the following species: harbor seals, Chinook salmon, Coho salmon, Steelhead trout, green sturgeon, Pacific herring, and a number of Fishery Management Plan-managed fish species.

Broadly speaking, the Central Bay is the thoroughfare for all migrating fish and other marine species transiting through the Bay to and from spawning habitat, nursery areas, or other forage areas within the Bay-Delta and out through the Golden Gate and open ocean. Due to the proposed project's location in close proximity to the Central Bay, project activities would potentially expose special-status and sensitive fish and marine mammals moving through the Golden Gate to and from the Central Bay and South Bay to the following types of impacts:

- Increased noise from in-water pile driving, and increased vessel traffic
- Increased resuspension of sediments from dredging, pile removal, anchor placement and removal
- Increased potential for collisions and harassment of marine mammals through increased vessel traffic locally

Construction Noise and Other Harassment

Potential noise impacts from in-water construction, particularly from pile-driving operations on fish and marine mammals moving through the project area are potentially significant, but would be reduced to be less than significant for acute and chronic effects on fish and marine mammals by the implementation of **Mitigation Measures 4.B-1a, 4.B-1b, and 4.B-1c**, which require consultation with NMFS regarding potential project effects and measures to reduce the effects of pile driving on fish and marine mammals.

In addition, the project applicant will enter into formal consultation with NMFS under the Marine Mammal Protection Act, the Magnuson-Stevens Act, and the federal Endangered Species Act regarding potential project effects on marine mammals, essential fish habitat and federally listed threatened and endangered species respectively, as well as with CDFW regarding state-listed species. These consultations, which would support the subsequent regulatory actions of various federal and

state approvals (e.g. wetland permitting) required for in-water work, would identify measures to reduce potentially significant impacts on marine mammals and federal and state protected fish species. Therefore, with the implementation of **Mitigation Measures 4.B-1a, 4.B-1b, and 4.B-1c**, and compliance with the requirements of the NMFS and CDFW consultations, the potential impacts of in-water work on movement or migration of marine mammals and special-status fish species would be less than significant.

Boat Noise

Installation of marina slips would be expected to result in a local increase in operational boat noise over existing conditions due to increased vessel traffic. However, the San Francisco Bay-Delta is the largest estuary on the West Coast of the United States, has a very large and active recreational and commercial boating community, and the busy Port of Oakland is located northwest of the proposed project site. Overall ambient noise levels within Bay and Estuary waters are already relatively high and the marine species using Bay waters are habituated to noise levels above those that would occur in less traveled waters.

Avian Collisions with Buildings and Night Lighting

The project site is located within the Pacific Flyway along the eastern shoreline of San Francisco Bay. While exact migratory corridors through the area are unknown and vary by species, birds typically follow coastlines, rivers, and mountain ranges in their migratory passages from wintering to breeding grounds and back again. Alameda Island, including the project area, provides foraging and roosting habitat for numerous migratory species.

The waters of the Bay including the Oakland-Alameda Estuary and Alaska Basin provide valuable stopover habitat for migratory birds. Development of the proposed project may increase the risk of bird collisions over that posed by existing structures. This would be a significant impact because migratory birds are protected under the Migratory Bird Treaty Act and native resident nongame birds are protected from take under the California Fish and Game Code.

Many collisions are induced by artificial night lighting, particularly from large buildings, which can be especially problematic for migrating songbirds since many are nocturnal migrants (Ogden, 1996). The tendency of birds to move towards lights at night when migrating, and their reluctance to leave the sphere of light influence for hours or days once encountered (Graber 1968), has been well documented (Ogden 1996). It has been suggested that structures located at key points along migratory routes may present a greater hazard than those at other locations (Ogden 2002). Other research suggests that fatal bird collisions increase as light emissions increase, that weather often plays an important part in increasing the risk of collisions (Verheijen 1981), and that nights with heavy cloud cover and/or precipitation present the conditions most likely to result in high numbers of collisions (Ogden, 2002). The type of light used may affect its influence on the birds: for example, studies have indicated that blinking lights or strobe lights affect birds significantly less than non-blinking lights (Gauthreaux and Belser 2006, Evans et al. 2007).

Collisions with lighted buildings and other structures are not the only danger that nighttime lighting has for migratory birds. Even if collisions are avoided, birds are still at risk of death or

injury. Birds can become “trapped” by a light source and, disoriented, continue to fly around the source until they become exhausted and drop to the ground, where they may be killed by predators (Ogden, 1996) or die from stress or exhaustion (Reed et al., 1985). Light attraction in birds is positively related to light intensity, and studies have shown that reduction in lighting intensity and changing fixed lighting to a flashing or intermittent light system can dramatically reduce avian mortality at lighted structures (Jones and Francis 2003). At least one controlled experiment has shown avian mortality can be dramatically reduced through shielding upward radiance of lighting fixtures. In an experiment with fledgling seabirds in Hawaii, shielding the upward radiation of lights resulted in a 40 percent reduction in attraction to lights as the fledglings made their way from their nesting colonies to the sea (Reed et al. 1985). Furthermore, during the study the sides of large buildings and the grounds remained fully lit by the shielded lights, suggesting that birds are not attracted to lighted areas per se but, rather to point-sources of light, which may be related to the use of stars and the moon as navigational aids (*ibid.*). Although the project site is located within the Pacific Flyway and in close proximity to the East Bay shoreline, specific migratory corridors in the vicinity of the project site are unknown. It can be assumed, however, that numerous birds pass overhead or in the project vicinity during spring and fall migrations.

Direct effects on migratory as well as resident birds moving through an area include death or injury as the birds collide with lighted structures and other birds that are attracted to the light, as well as collisions with glass during the daytime, while indirect effects for migratory birds include delayed arrival at breeding or wintering grounds, and reduced energy stores necessary for migration, winter survival, or subsequent reproduction (Gauthreaux and Belser, 2006).

While the proposed project site is currently unlit it is located in a generally urban setting and surrounded by other light sources, including the brightly lit Port of Oakland to the northwest, that provide a significant source of illumination of nearby unlit natural areas thereby raising ambient light levels. Development facilitated under the proposed project is expected to increase the amount of light and glare generated at the project site associated with the potential use of reflective building materials, street light fixtures, nighttime lighting of commercial identification signs and logos, and increased vehicle and transit use. Consistent use of the standard design review process for developments within the Northern Waterfront GPA area under the Implementing Policy 10.8.f, Urban Design and Aesthetics,¹¹ of the Northern Waterfront General Plan policies and incorporation of design standards such as downcasting lighting, limited night lighting, and the imposition of limits on the use of reflective building materials, would ensure that new development does not create unnecessary glare or lighting impacts on adjacent land uses (see Section 1, *Aesthetics*).

Given the typical altitude at which migrating birds fly, the fact that proposed lighting would be shielded, and studies that suggest night-flying birds are attracted to point-sources of light, rather than larger illuminated areas, it is unlikely that the lighting associated with the proposed project would interfere with a migratory corridor or provide a hazard for migratory birds through the phenomenon of light “entrapment.”

¹¹ Policy 10.8.f states: Ensure that new development does not create unnecessary glare or lighting impacts on adjacent land uses.

Nonetheless, the project is located in proximity to San Francisco Bay, known as a migratory stopover site, and therefore development facilitated by the proposed project has the potential to result in a significant new source of light that may act as an attractant for nocturnal migrating birds, resulting in collisions and avian mortality. For these reasons this is considered a potentially significant impact with respect to nocturnal migratory birds. Measures to reduce the risk of avian collisions should be incorporated in the construction and operations of new buildings, particularly when they are to be located in areas where the risk of collision may be heightened due to a number of risk factors, including location along a known migratory route, proximity to migratory stopover locations, proximity to open space and areas of natural habitat, and areas where low cloud ceilings are frequent (Brown et al., 2007).

Mitigation Measure 4.B-3 outlines protocols for minimizing avian collisions that were not fully defined in the GPA EIR. Implementation of **Mitigation Measure 4.B-3** would avoid and minimize these potential impacts by requiring design features such as patterned or fritted glass and decreasing reflectivity of surfaces to make buildings appear less transparent. The measure also calls for limiting night lighting, which would reduce the potential for disorientation. With implementation of **Mitigation Measure 4.B-3**, the impact would be less than significant.

Mitigation Measure 4.B-3: The City shall require that the project applicant retain a qualified biologist experienced with bird strike issues to review and approve the design of the building to ensure that it sufficiently minimizes the potential for bird strikes. The City may also consult with resource agencies such as the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or others, as it determines to be appropriate during this review.

The project applicant shall provide to the City a written description of the measures and features of the building design that are intended to address potential impacts on birds. The design shall include some of the following measures or measures that are equivalent to, but not necessarily identical to, those listed below, as new, more effective technology for addressing bird strikes may become available in the future:

- Employ design techniques that create “visual noise” via cladding or other design features that make it easy for birds to identify buildings as such and not mistake buildings for open sky or trees;
- Decrease continuity of reflective surfaces using “visual marker” design techniques, which techniques may include:
 - Patterned or fritted glass, with patterns at most 28 centimeters apart,
 - One-way films installed on glass, with any picture or pattern or arrangement that can be seen from the outside by birds but appear transparent from the inside,
 - Geometric fenestration patterns that effectively divide a window into smaller panes of at most 28 centimeters, and/or
 - Decals with patterned or abstract designs, with the maximum clear spaces at most 28 centimeters square.

- Up to 60 feet high on building facades facing the shoreline, decrease reflectivity of glass, using design techniques such as plastic or metal screens, light-colored blinds or curtains, frosting of glass, angling glass towards the ground, UV-A glass, or awnings and overhangs;
- Eliminate the use of clear glass on opposing or immediately adjacent faces of the building without intervening interior obstacles such that a bird could perceive its flight path through the glass to be unobstructed;
- Mute reflections in glass using strategies such as angled glass, shades, internal screens, and overhangs; and
- Place new vegetation sufficiently away from glazed building facades so that no reflection occurs. Alternatively, if planting of landscapes near a glazed building façade is desirable, situate trees and shrubs immediately adjacent to the exterior glass walls, at a distance of less than three feet from the glass. Such close proximity will obscure habitat reflections and will minimize fatal collisions by reducing birds' flight momentum.

Lighting. The project applicant shall ensure that the design and specifications for buildings implement design elements to reduce lighting usage, change light direction, and contain light. These include, but are not limited to, the following general considerations that should be applied wherever feasible throughout the proposed project to reduce night lighting impacts on avian species:

- Avoid installation of lighting in areas where not required for public safety
- Examine and adopt alternatives to bright, all-night, floor-wide lighting when interior lights would be visible from the exterior or exterior lights must be left on at night, including:
 - Installing motion-sensitive lighting
 - Installing task lighting
 - Installing programmable timers
 - Installing fixtures that use lower-wattage, sodium, and yellow-red spectrum lighting.
- Install strobe or flashing lights in place of continuously burning lights for any obstruction lighting.
- Where exterior lights are to be left on at night, install fully shielded lights to contain and direct light away from the sky.

Antennae, Monopole Structures, and Rooftop Elements. The City shall ensure, as a condition of approval for every building permit, that buildings minimize the number of and co-locate rooftop-antennas and other rooftop equipment, and that monopole structures or antennas on buildings, in open areas, and at sports and playing fields and facilities do not include guy wires.

Educating Residents and Occupants. The City shall ensure, as a condition of approval for every building permit, that the project applicant agrees to provide educational materials to building tenants, occupants, and residents encouraging them to minimize light transmission

from windows, especially during peak spring and fall migratory periods, by turning off unnecessary lighting and/or closing window coverings at night. The City shall review and approve the educational materials prior to building occupancy.

Documentation. The project applicant and/or City shall document undertaking the activities described in this mitigation measure and maintain records that include, among others, the written descriptions provided by the building developer of the measures and features of the design for each building that are intended to address potential impacts on birds, and the recommendations and memoranda prepared by the qualified biologist experienced with bird strikes who reviews and approves the design of any proposed projects to ensure that they sufficiently minimize the potential for bird strikes.

Significance after Mitigation: Less than Significant.

Impact 4.B-5: Development facilitated by the proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant with Mitigation)

The BCDC's San Francisco Bay Plan contains findings and policies related to fish and wildlife, water quality, fill, recreation, public access, and the appearance and design of shorelines, as well as procedures for BCDC control of filling, dredging, and shoreline development. The proposed project would incorporate a public promenade and plaza and facilitate in-water development of a marina and a future water shuttle facility, which would both provide public access to water-related uses consistent with the Bay Plan. The potential impacts discussed above would be mitigated to less than significant levels through implementation of the mitigation measures proposed in this Initial Study / SMND. In addition, BCDC permitting for project elements within Bay waters or within the 100 foot shoreline band would require measures to ensure that development facilitated by the project would be protective of the Bay's biological resources. Thus, the proposed project would generally be consistent with the Bay Plan.

The San Francisco Baylands Habitat Goals and Subtidal Habitat Goals Reports, as discussed in the Regulatory Framework, provide a scientific foundation and approach for the conservation and enhancement of the baylands and submerged areas of San Francisco Bay. These reports contain recommended conservation goals for Bay habitats potentially affected by project activities that can be used by permitting agencies when evaluating proposed projects within their jurisdiction. They are supported by most of the agencies and non-governmental groups with major planning, operational, or regulatory interests in Bay Area wetlands. Although the Goals Project has no regulatory authority, any adverse effects on wetlands, shorelines, and subtidal habitats would also have potential negative effects on special-status species, critical habitat for federal listed species, managed fish species Essential Fish Habitat, or habitat for protected marine mammals.

As discussed above under criterion "a", "b", "c", and "d", development facilitated by the proposed project could result in potentially significant impacts on biological resources, which could conflict with applicable local policies or ordinances protecting biological resources. However, with implementation of **Mitigation Measure BIO-1** from the GPA EIR and **NEW**

Mitigation Measures 4.B-1a through 4.B-1e (avoid and minimize impacts on special-status wildlife), **NEW Mitigation Measures 4.B-2a through 4.B-2c** (avoid and minimize impacts to sensitive natural communities), **Mitigation Measure BIO-2 from the GPA EIR** (avoid and minimize impacts on jurisdictional waters), and **Mitigation Measure 4.B-3** (avoid and minimize impacts to migratory and breeding wildlife), development facilitated by the proposed project would be implemented in a manner intended to:

- Maintain and improve the quality of the bay, ocean, and shoreline areas;
- Promote the use and development of shoreline areas consistent with the City of Alameda General Plan and the San Francisco Bay Plan;
- Cooperate with and otherwise support regulatory programs of existing regional, state, and federal agencies concerned with San Francisco Bay Area biological resources; and
- Protect rare and endangered species as well as the habitats of known plant and animal species that require a relatively natural environment.

Therefore, with implementation of the measures described above, the potential for the project to conflict with applicable local policies or ordinances protecting biological resources in the project area is low and would represent a less-than-significant impact. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Significance after Mitigation: Less than Significant.

Comparison to Northern Waterfront GPA EIR Findings: No new or more severe impact.

Impact 4.B-6: Development facilitated by the proposed project would conflict with an adopted local, regional, or State Habitat Conservation Plan. (Less than Significant with Mitigation)

The San Francisco Estuary Project (SFEP) is a federal-state-local partnership established under the Clean Water Act's National Estuary Program. It is a cooperative effort working to promote effective management of the Bay-Delta Estuary, and to restore and maintain its water quality and natural resources while maintaining the region's economic vitality. The SFEP oversees and tracks implementation of its Comprehensive Conservation and Management Plan (CCMP) goals, objectives and actions to protect and restore the Estuary. The CCMP serves as a roadmap for restoring the Estuary's chemical, physical, and biological health and was adopted in 1993, with an updated CCMP adopted in 2007.

The San Francisco Baylands Habitat Goals and Subtidal Habitat Goals Reports, provide a scientific foundation and approach for the conservation and enhancement of the baylands and submerged areas of San Francisco Bay. The Baylands Habitat Goals establish a long-term vision

for a healthy and sustainable baylands ecosystem. The Goals Project was recommended by the Governor's "California Wetlands Conservation Policy" and by the Comprehensive Conservation and Management Plan (CCMP) of the U.S. Environmental Protection Agency's San Francisco Estuary Project. The Subtidal Habitat Goals were prepared in collaboration among BCD, California Ocean Protection Council/California State Coastal Conservancy, NOAA, and the San Francisco Estuary Partnership (Goals Project 2010). These reports contain recommended conservation goals for Bay habitats potentially affected by project activities that can be used by permitting agencies when evaluating proposed projects within their jurisdiction. Although the Comprehensive Conservation Plan and Goals Project are not regulatory documents they are supported by most of the agencies and non-governmental groups with major planning, operational, or regulatory interests in Bay Area wetlands and, as the analysis above shows, any adverse effects on wetlands, shorelines, and subtidal habitats would also have potential negative effects on special-status species, critical habitat for federal listed species, managed fish species Essential Fish Habitat, or habitat for protected marine mammals.

Implementation of the proposed project could result in potentially significant impacts on biological resources, which could conflict with applicable policies of the CCMP and the Goals Project. However, implementation of **GPA EIR Mitigation Measures BIO-1 and BIO-2** from the GPA EIR, **Mitigation Measures 4.B-1a through 4.B-1e, 4.B-2a through 4.B-2c, and 4.B-3**, described above, would reduce potentially significant impacts on biological resources to ensure that the project does not conflict with habitat conservation plans or natural community conservation plans. This is the same finding as the proposed project in the GPA EIR. The effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Significance after Mitigation: Less than Significant.

Cumulative Impacts

This analysis evaluates whether the impacts of the proposed project, including development facilitated by the project, together with the impacts of cumulative development, would result in a cumulatively significant impact on special-status species, wetlands and other waters of the U.S., or other biological resources protected by federal, state, or local regulations or policies (based on the significance criteria and thresholds presented earlier). This analysis then considers whether the incremental contribution of the proposed project to this cumulative impact would be considerable. Both conditions must apply in order for a project's cumulative effects to rise to the level of significance.

Impact 4.B-7: The proposed project, in conjunction with other past, current, or foreseeable development in Alameda, could result in cumulative impacts on biological resources. (Less than Significant with Mitigation)

The geographic scope of potential cumulative impacts on biological resources encompasses the project site as well as biologically linked areas sharing the Oakland Estuary and greater San

San Francisco Bay. Past projects within this context, including the development of civic facilities, residences, commercial and industrial areas, and infrastructure, have already caused substantial adverse cumulative changes to biological resources in the project area. For example, parts of the City of Alameda sit on fill of what were once tidal mudflats and marshes, with a nearly complete loss of the original habitat types and many of the species that once occurred there. For this reason, natural communities on Alameda Island are rare—even where open space persists. Areas on the island that were landscaped or have revegetated naturally over time provide a “new normal” in terms of habitat that is often simplified in terms of diversity, and supporting a different suite of species than once existed there. Overall, this is true of many areas surrounding the Bay. Therefore, due to past projects, there has already been an adverse significant cumulative effect on biological resources. With the addition of current and other proposed projects, there is an existing significant cumulative impact *without* the project.

Although the project would develop the area with commercial, residential, recreational, and maritime uses that could disturb sensitive species or habitat, the project would implement mitigation measures that would ensure these impacts are less than significant. While there is no sensitive habitat located on land within the project site, the project could disturb aquatic habitat in the Alameda Basin. Other projects are located along Alameda’s waterfront, and some will involve in-water work, such as Alameda Marina and Shipways. All of these areas have limited habitat value for wildlife as they are already primarily or fully developed. However, the proximity of some projects to the waters of San Francisco Bay and the Oakland-Alameda Estuary could lead to potential cumulatively significant impacts on waterbirds and marine life and demolition of existing buildings or removal of existing vegetation could lead to significant cumulative impacts on nesting or roosting bats and birds. Other foreseeable projects that involve in-water work and could result in cumulative impacts on biological resources, in combination with the proposed project, are the proposed San Francisco Bay Area Water Emergency Transportation Authority Central Bay Operations and Maintenance Facility, redevelopment of Treasure Island and Hunter’s Point, redevelopment associated with the Alameda Marina Master Plan, Shipways at Marina Village, and Port of Oakland maintenance dredging. These projects would include many of the same activities as would occur under the proposed project (e.g., dredging, pile driving, wharf improvements, increased boat traffic) and can be assumed to have similar effects on marine biological resources, resulting in a potentially significant cumulative impact.

Beyond the project area, there could be cumulative impacts on sensitive biological resources located throughout the Bay. For example, the proposed project might affect birds that use foraging and nesting habitats in the project area but also other habitats quite distant from the project area; these birds could therefore be affected by other projects. Cumulative impact assessment at this scale is speculative, and offsetting these impacts are large-scale habitat improvement projects such as the tidal marsh restoration efforts at the San Leandro Shoreline Marshlands and Hayward Regional Shoreline and the South Bay Salt Pond Restoration Projects, which are intended to provide a net benefit to biological resources.

Environmentally protective laws and regulations have been applied with increasing rigor since the early 1970s. These include the California Endangered Species Act, federal Endangered Species Act, and the Clean Water Act, as described in the biological resources Regulatory Framework,

above. The project and other likely future projects within the vicinity of the project area are required to comply with local, State, and federal laws and policies, and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on biological resources. Additionally, future projects would be required to demonstrate that they would not have significant effects on these biological resources, although it is possible that some projects may be approved even though they would have significant, unavoidable impacts on biological resources. These regulatory requirements should serve, in many cases, to reduce future contributions to cumulative impacts on biological resources in the project area.

As discussed in Subsection 4.B.3, *Impacts and Mitigation Measures*, the project would implement several mitigation measures to ensure impacts to biological resources from the proposed project are reduced to a less-than-significant level. These measures include pre-construction surveys, requirements for biological monitoring, and best management practices for minimizing effects to sensitive species and habitat that could be affected by the project during construction, as well as minimize effects during operation of the project. With implementation of these measures, there would be no significant impact to: special-status species, sensitive natural communities, federally and state protected waters and wetlands, native movement wildlife corridors, or native wildlife nursery sites, and the project would not conflict with applicable local policies or ordinances or the provisions of an adopted habitat conservation plan.

With implementation of **GPA EIR Mitigation Measure BIO-1** (requiring a pre-construction survey for bat roosting sites), **GPA EIR Mitigation Measure BIO-2** (requiring dredging activities to be consistent with the Long-Term Management Strategy program), **NEW Mitigation Measures 4.B-1a through 4.B-1e** (avoid and minimize impacts on special-status wildlife), **NEW Mitigation Measures 4.B-2a through 4.B-2c** (avoid and minimize impacts to sensitive natural communities), and **NEW Mitigation Measure 4.B-3** (avoid and minimize impacts to migratory and breeding wildlife) the project, would result in less-than-significant impacts on biological resources within and in the vicinity of the project site. When considered within the existing condition of biological resources in the project area and the greater Bay Area in the context of past, present and reasonably foreseeable similar projects, the project would add only a minor, incremental contribution to habitat loss, degradation, and direct and indirect impacts to special-status species. The project's contribution would not be considered cumulatively considerable; therefore, in combination with past, present, and reasonably foreseeable future projects, the proposed project's cumulative effects on biological resources would be less than significant.

Significance after Mitigation: Less than Significant.

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C. Land Use Consistency and Compatibility

C.1 Introduction

This section describes the existing and planned land uses in the project area, identifies adopted plans that guide the City's land use and planning decisions, and evaluates land use impacts resulting from implementation of the proposed project.

C.2 Environmental Setting

Land Uses in the Vicinity

The project site vicinity is shown in **Figure 3-3**. Surrounding land uses in the vicinity include the Wind River office/research park located across Alaska Basin to the west, the Oakland Estuary to the north, the Fortman Marina to the east, and the Del Monte property to the south. The Oakland Estuary is a 7-mile long, approximately 1,000-foot-wide water body separating Oakland and Alameda. It receives marine traffic from both commercial and recreational users. Beyond the Oakland Estuary to the north is the Port of Oakland container terminal, which includes roadways, railroad facilities, shipping cranes, and container storage areas. Across the Oakland Estuary to the north and east are commercial and industrial uses that fall within the City of Oakland city limits. Coast Guard Island, part of the City of Alameda, is located in the Oakland Estuary to the northeast of the project site. Beyond the Del Monte building to the south are primarily single family residential neighborhoods and Littlejohn Park. The Alameda Beltline site, and future site of the planned 22-acre Jean Sweeny Open Space Park, is located to the west of the project site across Atlantic Avenue.

General Plan Land Use and Zoning Designation

The project site is designated as Specified Mixed Use in the General Plan Land Use Element and a Housing Opportunity site in the General Plan Housing Element. General Industry and Parks and Open Space uses are located directly to the west. Directly to the south is the Del Monte parcel, also designated as Specified Mixed Use, beyond which Medium Density Residential and Parks and Open Space uses are located. To the east of the site are areas designated for Commercial Recreation and additional Specified Mixed Use lands. To the north are the waters of the Oakland Estuary.

The project site is zoned mixed use planned development (M-X) with approximately 17 acres of the site, outside the tidelands area, falling within the multi-family overlay (MF) in the Zoning District. The surrounding parcels include: one large parcel to the west zoned commercial manufacturing planned development (C-M-PD); one parcel to the southwest zoned intermediate industrial planned development (M-1-PD); an adjacent parcel to the south (Del Monte) zoned mixed use (M-X) that falls within the multi-family overlay (MF); a parcel to the southeast zoned neighborhood residential planned development (R-4-PD) with multi-family overlay (MF); and a parcel zoned for open space (O) to the southeast. The broader surrounding land uses include mixed use (M-X), two-family residential (R-2), garden residential (R-3), and neighborhood residential (R-4).

C.3 Regulatory Framework

Applicable plans and major policies and regulations that pertain to the project site are presented below, followed by a discussion of the project's overall consistency (or inconsistency) with each plan. Several land use plans, policies, and regulations apply to the project site. Consistent with CEQA, not every policy that could apply to the project is included here. Rather, the focus of this analysis is on potential conflicts with policies that were adopted for the purpose of avoiding or mitigating an environmental effect that could result in significant adverse physical effects on the environment.

Federal

There are no federal regulations with respect to land use that apply to the project.

State

San Francisco Bay Conservation and Development Commission's Plans and Policies

The San Francisco Bay Conservation and Development Commission (BCDC) is a state agency with permit authority over the Bay and its shoreline. Created by the McAteer-Petris Act in 1965 (Title 7.2, commencing with Section 66000, of the California Government Code), BCDC regulates filling, dredging, and changes in use in San Francisco Bay. The creation of BCDC was a legislative response to address environmental damage created by years of extensive and unmanaged filling by developing policies and regulations that recognize and protect San Francisco Bay.

Of primary concern to BCDC is the placement of new "fill" (generally defined as any material in or over the water surface, including pilings, structures placed on pilings, and floating structures) in the Bay. The McAteer-Petris Act imposes very strict standards for the placement of new fill. Placement of fill may be allowed only for uses that are (1) necessary for public health, safety or welfare of the entire Bay Area; (2) water-oriented uses, such as water-related industry, water-oriented recreation, and public assembly and the like; or (3) minor fill to improve shoreline appearance and public access. Fill must be the minimum necessary for the purpose and can be permitted only when no alternative upland location exists.

In addition, BCDC regulates new development within 100 feet of the shoreline to ensure that maximum feasible public access is provided to and along the Bay. BCDC is also charged with ensuring that the limited amount of shoreline property suitable for regional high-priority water-oriented uses (e.g., ports, water-related industry, water-oriented recreation, airports, and wildlife areas) is reserved for these purposes. Land-side uses and structural changes are governed by policies regarding public access. BCDC can require, as conditions of permits, shoreline public access improvements consistent with a proposed project, such as, but not limited to, pathways, observation points, bicycle racks, parking, benches, landscaping, and signs. BCDC planning documents applicable to San Francisco Bay's waterfront are described below.

San Francisco Bay Plan

The San Francisco Bay Plan (Bay Plan) was prepared by BCDC from 1965 through 1969 and amended through 2007 in accordance with the McAtteer-Petris Act. The Bay Plan guides the protection and use of the Bay and its shoreline within the nine Bay Area counties. BCDC has permit jurisdiction over shoreline areas subject to tidal action up to the mean high tide line and including all sloughs, tidelands, submerged lands, and marshlands lying between the mean high tide and 5 feet above mean sea level, and the land lying between the Bay shoreline and a line drawn parallel to and 100 feet from the Bay shoreline which is known as the 100-foot shoreline band. Under the McAtteer-Petris Act, the Bay Plan provides policy direction for BCDC's permit authority regarding the placement of fill, extraction of materials, determining substantial changes in use of land, water, or structures within its jurisdiction, protection of the Bay habitat and shoreline, and maximizing public access to the Bay.

Part IV of the Bay Plan contains findings and policies that pertain to development of the Bay and shoreline. These findings and policies address the many facets that comprise the uses, needs and design issues associated with balancing the environmental, ecological, economic, recreational and social objectives of development within or along the shoreline of the Bay. The categories of policies include: climate change; safety of fills; shoreline protection; dredging; water-related industry; ports; airports; transportation; commercial fishing; recreation (including marinas); public access; appearance, design and scenic views; salt ponds; managed wetlands; other uses of the Bay and shoreline; fill for various uses; mitigation; Public Trust; and navigational safety and oil spill prevention.

The Bay Plan policies with which the proposed project or variants may pose a potential conflict are listed below. The physical effects associated with the potential conflicts with these policies are discussed in Chapter 4, Environmental Setting, Impacts and Mitigation Measures, under the appropriate resource topic. The compatibility of the project with policies that do not relate to physical environmental issues will be considered by decision-makers as part of their decision whether to approve or disapprove the proposed project.

Development of the Bay and Shoreline, Dredging

Policy 1 Dredging and dredged material disposal should be conducted in an environmentally and economically sound manner. Dredgers should reduce disposal in the Bay and certain waterways over time to achieve the LTMS goal of limiting in-Bay disposal volumes to a maximum of one million cubic yards per year. The LTMS agencies should implement a system of disposal allotments to individual dredgers to achieve this goal only if voluntary efforts are not effective in reaching the LTMS goal. In making its decision regarding disposal allocations, the Commission should confer with the LTMS agencies and consider the need for the dredging and the dredging projects, environmental impacts, regional economic impacts, efforts by the dredging community to implement and fund alternatives to in-Bay disposal, and other relevant factors. Small dredgers should be exempted from allotments, but all dredgers should comply with policies 2 through 12.

Policy 2 Dredging should be authorized when the Commission can find: (a) the applicant has demonstrated that the dredging is needed to serve a water-oriented use or

other important public purpose, such as navigational safety; (b) the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board; (c) important fisheries and Bay natural resources would be protected through seasonal restrictions established by the California Department of Fish and Game, the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service, or through other appropriate measures; (d) the siting and design of the project will result in the minimum dredging volume necessary for the project; and (e) the materials would be disposed of in accordance with Policy 3.

Development of the Bay and Shoreline, Recreation

Policy 1 Diverse and accessible water-oriented recreational facilities, such as marinas, launch ramps, beaches, and fishing piers, should be provided to meet the needs of a growing and diversifying population, and should be well distributed around the Bay and improved to accommodate a broad range of water-oriented recreational activities for people of all races, cultures, ages and income levels. Periodic assessments of water-oriented recreational needs that forecast demand into the future and reflect changing recreational preferences should be made to ensure that sufficient, appropriate water-oriented recreational facilities are provided around the Bay. Because there is no practical estimate of the acreage needed on the shoreline of the Bay, waterfront parks should be provided wherever possible.

Policy 3 Recreational facilities, such as waterfront parks, trails, marinas, live-aboard boats, non-motorized small boat access, fishing piers, launching lanes, and beaches, should be encouraged and allowed by the Commission, provided they are located, improved and managed consistent with the following standards:

a). General Recreational facilities should: (1) Be well distributed around the shores of the Bay to the extent consistent with the more specific criteria below. Any concentrations of facilities should be as close to major population centers as is feasible; (2) Not pre-empt land or water area needed for other priority uses, but efforts should be made to integrate recreation into such facilities to the extent that they are compatible.; (3) Be feasible from an engineering viewpoint; and (4) Be consistent with the public access policies that address wildlife compatibility and disturbance. In addition: (5) Different types of compatible public and commercial recreation facilities should be clustered to the extent feasible to permit joint use of ancillary facilities and provide a greater range of choices for users. (6) Sites, features or facilities within designated waterfront parks that provide optimal conditions for specific water-oriented recreational uses should be preserved and, where appropriate, enhanced for those uses, consistent with natural and cultural resource preservation. (7) Access to marinas, launch ramps, beaches, fishing piers, and other recreational facilities should be clearly posted with signs and easily available from parking reserved for the public or from public streets or trails. (8) To reduce the human health risk posed by consumption of contaminated fish, projects that create or improve fishing access to the Bay at water-oriented recreational facilities, such as fishing piers, beaches, and marinas, should include signage that informs the public of consumption advisories for the species of Bay fish that have been identified as having potentially unsafe levels of contaminants. (9) Complete segments of the Bay and Ridge Trails where appropriate, consistent with policy 4-a-6.

b). Marinas. (1) Marinas should be allowed at any suitable site on the Bay. Unsuitable sites are those that tend to fill up rapidly with sediment and require frequent dredging; have insufficient upland; contain valuable tidal marsh or tidal flat, or important subtidal areas; or are needed for other water-oriented priority uses. At suitable sites, the Commission should encourage new marinas, particularly those that result in the creation of new open water through the excavation of areas not part of the Bay and not containing valuable wetlands. (2) Fill should be permitted for marina facilities that must be in or over the Bay such as breakwaters, shoreline protection, boat berths, ramps, launching facilities, pump-out and fuel docks, and short-term unloading areas. Fill for marina support facilities may be permitted at sites with difficult land configurations provided that the fill in the Bay is the minimum necessary and any unavoidable loss of Bay habitat, surface area, or volume is offset to the maximum amount feasible, preferably at or near the site. (3) No new marina or expansion of any existing marina should be approved unless water quality and circulation will be adequately protected and, if possible, improved, and an adequate number of vessel sewage pump-out facilities that are convenient in location and time of operation to recreational boat users should be provided free of charge or at a reasonable fee, as well as receptacles to dispose of waste oil. (4) In addition, marinas should include public amenities, such as viewing areas, restrooms, public mooring docks or floats and moorages for transient recreational boaters, non-motorized small boat launching facilities, public parking; substantial physical and visual access; and maintenance for all facilities.

e). Non-Motorized Small Boats. (1) Where practicable, access facilities for non-motorized small boats should be incorporated into waterfront parks, marinas, launching ramps and beaches, especially near popular waterfront destinations. (2) Access points should be located, improved and managed to avoid significant adverse affects on wildlife and their habitats, should not interfere with commercial navigation, or security and exclusion zones or pose a danger to recreational boaters from commercial shipping operations, and should provide for diverse, water-accessible overnight accommodations, including camping, where acceptable to park operators. (3) Sufficient, convenient parking that accommodates expected use should be provided at sites improved for launching non-motorized small boats. Where feasible, overnight parking should be provided. (4) Site improvements, such as landing and launching facilities, restrooms, rigging areas, equipment storage and concessions, and educational programs that address navigational safety, security, and wildlife compatibility and disturbance should be provided, consistent with use of the site. (5) Facilities for boating organizations that provide training and stewardship, operate concessions, provide storage or boathouses should be allowed in recreational facilities where appropriate. (6) Design standards for non-motorized small boat launching access should be developed to guide the improvement of these facilities. Launching facilities should be accessible and designed to ensure that boaters can easily launch their watercraft. Facilities should be durable to minimize maintenance and replacement cost.

f). Fishing Piers. Fishing piers should not block navigation channels, nor interfere with normal tidal flow.

h). Water-oriented commercial-recreation. Water-oriented commercial recreational establishments, such as restaurants, specialty shops, private boatels, recreational equipment concessions, and amusements, should be encouraged in urban areas adjacent to the Bay. Public docks, floats or moorages for visiting boaters should be encouraged at these establishments where adequate shoreline facilities can be provided. Effort should be made to link commercial-recreation centers and waterfront parks by ferry or water taxi.

Policy 9 Ferry terminals may be allowed in waterfront park priority use areas and marinas and near fishing piers and launching lanes, provided the development and operations of the ferry facilities do not interfere with current or future park and recreational uses, and navigational safety can be assured. Terminal configuration and operation should not disrupt continuous shoreline access. Facilities provided for park and marina patrons, such as parking, should not be usurped by ferry patrons. Shared parking arrangements should be provided to minimize the amount of shoreline area needed for parking.

Development of the Bay and Shoreline, Public Access

Policy 5 Public access should be sited, designed, managed and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding.

Policy 6 Whenever public access to the Bay is provided as a condition of development, on fill or on the shoreline, the access should be permanently guaranteed. This should be done wherever appropriate by requiring dedication of fee title or easements at no cost to the public, in the same manner that streets, park sites, and school sites are dedicated to the public as part of the subdivision process in cities and counties. Any public access provided as a condition of development should either be required to remain viable in the event of future sea level rise or flooding, or equivalent access consistent with the project should be provided nearby.

Policy 7 Public access improvements provided as a condition of any approval should be consistent with the project and the physical environment, including protection of Bay natural resources, such as aquatic life, wildlife and plant communities, and provide for the public's safety and convenience. The improvements should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier free access for persons with disabilities to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs.

Policy 9 Access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available. Diverse and interesting public access experiences should be provided which would encourage users to remain in the designated access areas to avoid or minimize potential adverse effects on wildlife and their habitat.

Development of the Bay and Shoreline, Appearance, Design, and Scenic View

- Policy 1** To enhance the visual quality of development around the Bay and to take maximum advantage of the attractive setting it provides, the shores of the Bay should be developed in accordance with the Public Access Design Guidelines.
- Policy 2** All bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay. Maximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas, from the Bay itself, and from the opposite shore. To this end, planning of waterfront development should include participation by professionals who are knowledgeable of the Commission's concerns, such as landscape architects, urban designers, or architects, working in conjunction with engineers and professionals in other fields.
- Policy 10** Towers, bridges, or other structures near or over the Bay should be designed as landmarks that suggest the location of the waterfront when it is not visible, especially in flat areas. But such landmarks should be low enough to assure the continued visual dominance of the hills around the Bay

Public Trust Lands

Approximately 6 acres of the project site that are presently or were formerly tide lands or submerged lands (i.e., lands below the historic mean high tide line) are subject to the Public Trust for commerce, navigation and fisheries ("Public Trust" or "Trust"). In California, the Public Trust doctrine gives the state title to tidelands and submerged lands that existed at the time of statehood in 1850. Lands subject to the Public Trust ("Trust Lands") are held in trust by the State of California on behalf of the public and are to be used to promote Public Trust purposes. The State may grant Trust Lands to local entities as trustees. Granted Trust Lands are subject to Public Trust restrictions on their use, as well as any limitations set forth in the granting statute. In 1913, the Legislature granted Trust Lands within the limits of the City of Alameda to the City as trustee.

Navigation, fisheries, maritime uses, hotels, water-oriented recreation, restaurants, visitor-serving retail, parks and open space are among the activities generally permitted on Trust Lands. Housing and general office are examples of uses generally not permitted on Trust Lands. As such, a land exchange is proposed as part of the project to effectuate a land exchange that would remove the Public Trust from certain lands, allowing them to be used for residential and other non-Trust uses, and impose the Public Trust on certain other lands that are not currently subject to the Trust, including a substantial portion of the waterfront lands within the project site.

The proposed land exchange is shown in **Figure 3-2**. Under the land exchange, Public Trust lands would be relocated from the southeastern end of the site to the northern and western perimeter of the project site, where waterfront-recreational uses are currently proposed.

Regional

Plan Bay Area and the Northern Waterfront PDA

The *Plan Bay Area*, which sets forth the region's proposed Sustainable Communities Strategy, was formally adopted by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) in July 2013. *Plan Bay Area* provides housing

and employment projections for the San Francisco Bay Area, as well as counties, cities, and priority development areas (PDAs).¹ In contrast to previous trends where new development primarily occurred on raw rural lands, the *Plan Bay Area* directs development to PDAs. According to ABAG, “this allows the region to reduce the emission of GHGs, house our population in a wide range of neighborhoods, preserve our natural resources, and support the creation of and greater access to new employment opportunities” (ABAG and MTC, 2013).

The project site falls within *Plan Bay Area*’s Northern Waterfront PDA, which includes the commercial, industrial, and residential properties along Alameda’s northern shoreline extending from Sherman Street to Tilden Way. The *Plan Bay Area* provides the following description for the PDA:

The City of Alameda envisions this area being redeveloped as a series of mixed use, waterfront and transit oriented neighborhoods that will provide a mix of jobs and transit oriented housing types to serve the next generation of Alameda residents. The plans propose that a mix of uses are developed on former industrial and auto-oriented lands and preserve former railroad right of way for future bus rapid transit or light rail improvements. The Clement Avenue corridor through the Northern Waterfront is a designated transit priority right of way. The plans emphasize the importance of a mix of uses and a diversity of housing types for all income and household types.

According to the *Plan Bay Area*, the Bay Area is expected to “experience more modest growth than in past decades.” Even so, ABAG still projects “healthy economic growth of 1.1 million jobs and 2 million people by 2040 as the Bay Area continues to attract cutting-edge, high technology companies, talent, and investment from around the world.” This regional projection “assumes a full-employment economy with unemployment rates returning to normal levels within a successful national economy. The forecast also recognizes the challenges with building new housing in the region that is largely multi-family and in infill locations, and the impact that has on our ability to capture potential job growth. Achieving this growth will require that the region respond to an aging and diversifying population, polarizing wages, high housing and transportation costs, and other issues affecting our quality of life” (ABAG and MTC, 2013). *Plan Bay Area* 2040 is the strategic update to the plan, which is currently under development with anticipated adoption in summer of 2017.

San Francisco Bay Trail

ABAG administers the San Francisco Bay Trail Plan (Bay Trail Plan). The Bay Trail is a multi-purpose recreational trail that, when complete, would encircle San Francisco Bay and San Pablo Bay with a continuous 500-mile network of bicycling and hiking trails; to date, 330 miles of the alignment have been completed. The trail would connect the shoreline of all nine Bay Area counties, link 47 cities, and cross the major bridges in the region.

¹ PDAs are areas where future growth within the Bay Area is intended to be concentrated. Within PDAs, “new development will support the day-to-day needs of residents and workers in a pedestrian-friendly environment served by transit” (ABAG and MTC, 2013).

Local Plans

City of Alameda General Plan

The City of Alameda General Plan is the principal policy document for guiding future development within the City. It is the framework on which the City must base decisions regarding growth, public services and facilities, and protection and enhancement of the community).

The General Plan establishes comprehensive, long-term land use policies for the City. Consistent with state law, the General Plan includes a Land Use Element; City Design Element; Transportation Element; Open Space and Conservation Element; Parks and Recreation, Shoreline Access, Schools and Cultural Facilities Element; Airport Environs Element (relates to Metropolitan Oakland International Airport); Health and Safety Element; and Housing Element; along with specific elements pertaining to Alameda Point and the Northern Waterfront.

The General Plan, by its comprehensive nature, contains policies that could sometimes conflict with one another, depending on the nature of a particular project. City decision-makers must determine whether, on balance, a project is consistent (i.e., in general harmony) with the General Plan. The fact that a specific project does not meet all General Plan goals, policies, and objectives does not inherently result in a significant effect on the environment, because a significant effect must be related to a significant adverse physical change. To the extent that a General Plan policy that is adopted for the purpose of avoiding or mitigating an environmental effect is used as a significance criterion or contains a regulatory threshold that the project must meet, the project's consistency with such policies is addressed within the relevant impact analysis discussions throughout Chapter 4.

Northern Waterfront General Plan Amendment

In the General Plan, the entire project site is designated as a Specified Mixed Use Site. Specific development policies and considerations are contained in the Northern Waterfront General Plan Amendment (GPA) that apply to the project site, and are also provided below. According to the Northern Waterfront GPA, the intent of the site-specific development policies for the Encinal Terminals Site is to:

...facilitate redevelopment of the site with new land uses that will take advantage of the unique site configuration and waterfront location, increase opportunities for public access and enjoyment of the waterfront and eliminate the existing uses which contribute a large volume of truck traffic in the vicinity. The Mixed Use designation will allow for the development of a wide range of land uses to capitalize on the site's unique location adjacent to the Alaska Basin, Oakland/Alameda Estuary, Fortman Marina, and Del Monte Warehouse site. Anticipated land uses in this district include a range of housing types, including senior housing, commercial, office, and public parks and open space. Public waterfront access around the perimeter of the site is envisioned, as well as a new marina on the Alaska Basin.

Encinal Terminals site specific land use policies contained in the Northern Waterfront GPA are provided below.

Site Development

- Policy E-T 1 Require that the master plan for the development of the Encinal Terminals site illustrate how the various parcels can be developed as a unified development. The master plan must address all phases of the development of the site.
- Policy E-T 2 Require that the master plan include adequate open space and a clear public access around the perimeter of the site.
- Policy E-T 3 The Master Plan should consider relocating the tidelands trust lands to the perimeter of the site to allow residential mixed-use development in the core of the site with publicly accessible open space around the perimeter of the site.
- Policy E-T 4 Cluster development to maximize open space and view corridors to the estuary.
- Policy E-T 5 Given that Encinal Terminals is surrounded by water on three sides, taller buildings should be located at the southern end of the site.
- Policy E-T 6 If a parking structure is proposed, require ground floor uses and/or a pedestrian friendly facade.
- Policy E-T 7 If a parking structure is proposed, locate the structure to serve public access to the waterfront and future development at the Del Monte site.
- Policy 10.8.e To ensure design compatibility with adjacent developments and neighborhoods, limit new building heights to 60 feet.

Land Use Program

- Policy E-T 8 The Master Plan for the Encinal Terminals site shall replace the existing container storage and cleaning operation with a mix of uses to create a lively waterfront development. The plan should include at least the following four land uses: residential, retail, commercial, and public open space.
- Policy E-T 9 Residential uses may include senior housing or assisted living facilities.
- Policy E-T 10 Commercial uses may include restaurants, marine related uses, office uses, and/or additional berths in the Alaska Basin. Additional berths should not be allowed on the northern edge of the site facing the Estuary and Coast Guard Island to preserve views of the water and Oakland.

On-Site Parking and Landscaping

- Policy E-T 11 Require that the master plan include inviting, well-designed public entrances from Clement Street. Primary vehicular access into the site should occur at a four-way intersection at Clement/Entrance, if feasible.
- Policy E-T 12 Consider opportunities for a public human powered/non-motorized boat launch facility at Alaska Basin.
- Policy E-T 13 Require public art installations adjacent to the Alaska Basin shoreline consistent with the Public Art Ordinance.

Public Improvements and Infrastructure

- Policy E-T 14 The Encinal Terminals development should fund a fair share of the costs of the Clement Street extension from Sherman to Grand.

- Policy E-T 15 The Encinal Terminals development should fund a fair share of the costs to upgrade storm sewer and wastewater facilities necessary to serve all future development within the Northern Waterfront area.
- Policy E-T 16 The site plan should allow for a shoreline public promenade around the perimeter of the site and adjacent to the Alaska Basin and Fortman Marinas.

Other Relevant General Plan Policies

The Alameda General Plan includes policies relating to several CEQA topics. Each section of Chapter 4 includes a Regulatory Setting that describes General Plan policies applicable to that resource topic. The General Plan Elements relating to land use are described below, and applicable land use policies are listed.

Land Use Element Policies

- Policy 2.4c Where a suitable residential environment can be created, give priority to housing on land to be developed or redeveloped in order to meet the qualified objectives of the Housing Element
- Policy 2.4.e Expand housing opportunities for households in all income groups.
- Policy 2.5a Provide enough retail businesses and services space to enable Alameda to realize its full retail sales potential and provide Alameda residents with the full range of retail business and services.

City Design Element Policies

- Policy 3.2.a Maximize views of water and access to shorelines.
- Policy 3.2.d Maintain views and access to the water along streets and other public rights-of-way that extend to the bulkhead line. Construct benches, ramps, rails, and seating appropriate for viewing and access, and provide walls or other screening where needed to protect adjoining property. Westline Drive, Grand Street, Park Street, Central Avenue and Encinal Avenue are candidates for architectural or landscape features that would enhance the meeting of land and water.
- Policy 3.2.e Encourage landmark structures at prominent locations.
- Policy 3.2.g Work with BCDC staff to prepare a schematic plan for development of the 100-foot-wide strip above mean high tide on properties likely to require BCDC development approval.

Transportation Element Policies

- Policy 4.1.6.d Minimize the cross-island portion of regional vehicular trips by providing alternative connections to Oakland, such as Water Taxis, shuttles, and a Bicycle Pedestrian Bridge and by encouraging Transportation Systems Management (TSM) and Transportation Demand Management (TDM) techniques.
- Policy 4.2.4b Encourage development patterns and land uses that promote the use of alternate modes and reduce the rate of growth in region-wide vehicle miles traveled.
- Policy 4.2.4c Encourage mixed use development that utilizes non-single occupancy vehicle transportation modes.

Open Space and Conservation Element Policies

- Policy 5.1.w Require new marinas and encourage existing marinas to provide easily accessible waste disposal facilities for sewage and bilge and engine oil residues.

Parks and Recreation, Shoreline Access, Schools and Cultural Facilities Element Policies

- Policy 6.1a Expand Alameda's park system.
- Policy 6.2h Require shoreline access where appropriate as a condition of development approval regardless of whether development occurs within the area of BCDC regulation.

Health and Safety Element Policies

Consistency with Health and Safety Element policies regarding seismic and geologic hazards are discussed in the *Geology and Seismicity* section of the Initial Study. Consistency with policies related to flooding and sea level rise are discussed in the *Hydrology and Water Quality* section of the Initial Study (see Appendix A).

Parks and Recreation, Shoreline Access, Schools and Cultural Facilities Element Policies

- Policy 6.1.e Work with property owner, Tidelands Lease holders, the Army Corp of Engineers, BCDC, the Coastal Conservancy, open space advocates, non-profits, and agencies, and to create a continuous shoreline access and park areas along the northern waterfront.
- Policy 6.2.c Ensure marina operating standards that prevent degradation of water quality.

Housing Element Policies

The Housing Element identifies the site as a Housing Opportunity site necessary to assist the City meet its Regional Housing Needs Allocation. Housing Element goals, objectives and/or policies that apply to the project land use are listed below:

- Goal #1 Provide housing services and opportunities to support, maintain, and enhance Alameda's diverse community and excellent quality of life and provide for the housing needs of Alameda's future residents and regional housing needs.
- Policy HE-1 Support public and private efforts to increase the supply of housing in Alameda consistent with the City's environmental, climate action, transportation, historic preservation and economic development policy objectives.
- Goal #3 Create transit oriented pedestrian friendly neighborhoods to reduce regional and local greenhouse gas emissions and local traffic congestion.
- Policy HE-10 To reduce greenhouse gas emissions and improve regional transportation services and facilities, facilitate and encourage mixed-use and residential development in the Northern Waterfront area and at Alameda Point consistent with Plan Bay Area, the regional sustainable communities' strategy.
- Goal #4 Ensure High Quality Architectural and Sustainable Site Design.
- Policy HE-12 Ensure that new residential development utilizes "green" building strategies, environmentally sensitive building technologies, and site planning strategies to minimize greenhouse gas emissions.

City of Alameda Zoning Ordinance

The Zoning Ordinance is a primary tool for implementing the policies of the General Plan, and addresses the physical development standards and criteria for the City of Alameda. One of the purposes of zoning is to implement the land use designations set forth in the General Plan.

The project site is zoned mixed use planned development (M-X) with approximately 13 acres of the site, outside the tidelands area, falling within the multi-family overlay (MF) in the Zoning Ordinance and is designated for mixed use in the General Plan.

Alameda Municipal Code (AMC) Section 30-4.20 states that the purpose of the MX, Mixed-Use Planned Development District Zoning District is to:

“...encourage the development of a compatible mixture of land uses which may include residential, retail, offices, recreational, entertainment, research oriented light industrial, water oriented or other related uses. The compatibility and interaction between mixed uses is to be insured through adoption of Master Plan (defined in subsection 30-4.20f) and development plan site plan (defined in subsection 30-4.20h), which indicate proper orientation, desirable design character and compatible land uses to provide for:

- a. A more pedestrian-oriented nonautomotive environment and flexibility in the design of land uses and structures than are provided by single purpose zoning districts, including but not limited to shared parking;
- b. The enhancement and preservation of property and structures with historical or architectural merit, unique topographic, landscape or water areas, or other features requiring special treatment or protection;
- c. Recreation areas that are most accessible to both the MX district's inhabitants and other City residents;
- d. Environments that are more conducive to mutual interdependence in terms of living, working, shopping, entertainment and recreation; and
- e. Flexibility in the design, lay-out and timing of build-out of large-scale mixed use projects in order to respond to market demands while ensuring that development is in conformance with adopted standards, procedures and guidelines. In order to accomplish this purpose, the City may establish Development Standards, Procedures and Guidelines (which govern, among other items, processing procedures, project-wide design guidelines addressing architecture, site planning, parking, circulation, streetscape, open space, landscaping, lighting, project identification and signage, and specific use design guidelines) as part of the Master Plan to which the Development Plans must then conform.

As described above, to ensure that each property zoned MX achieves the stated purposes of the Municipal Code, the MX zoning district requires that prior to development of the site, the property owners/developers must prepare a “Master Plan” for the property for review by the Planning Board and approval by the City Council. To approve a Master Plan, the City Council must find that the Master Plan is consistent with the City of Alameda General Plan, the purposes of the MX Zoning District, and that the Master Plan includes at least three different uses, one of which must be open space.

C.4 Impacts and Mitigation Measures

Significance Criteria

This analysis evaluates the proposed project's impacts on land uses based on the criteria identified in the State CEQA *Guidelines*, Appendix G. A land use impact is considered significant if implementation of the project would result in any of the following:

- Physically divide an established community;
- 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 plans, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Approach to Analysis

The evaluation of land use impacts resulting from implementation of the proposed project is based on: 1) a review of planning documents pertaining to the project site, including the City of Alameda General Plan and City of Alameda Zoning Ordinance; 2) a field review of the project site; 3) a review of planning documents pertaining to lands adjacent to the proposed project site; and 4) consultation with appropriate agencies. Changes in land use are not, in and of themselves, adverse environmental impacts.

Northern Waterfront GPA EIR

The GPA EIR concluded that development of the Northern Waterfront area would result in less-than-significant impacts related to compatibility with surrounding land uses, physical division of the established community, and compatibility with plans and policies including the Alameda General Plan, BCDC's San Francisco Bay Plan, and the Tidelands Trust lands.

Impact Analysis

This following impact analysis focuses on potential impacts of the proposed project related to land use changes and policy conflicts

Impact 4.C-1: The proposed project would not physically divide an established community. (Less than Significant)

For the purpose of this impact analysis, physically dividing an established community means the creation of barriers that prevent or hinder the existing flow of people or goods through an established community, or the placement of a development in such a manner that it physically separates one portion of an established community from the remainder of that community. For example, a freeway or other limited access roadway or a rail line would be considered such a barrier, as could a fence or wall or, potentially, a system of discontinuous streets, depending on wayfinding guidance provided.

The project site is located within an urban area, adjacent to residential, commercial and industrial land uses. The project site is bordered by the Oakland Estuary to the north, Fortman Marina to the east, the Del Monte Warehouse to the south, and the Alaska Basin to the west. The project site is currently surrounded by fencing and is not accessible to the public, nor does the site provide access to any of the surrounding land uses. The proposed project would develop the site with a mix of residential, commercial, and public uses and would provide vehicular and pedestrian circulation within the site. The proposed project would contribute financially to the cost of extending Clement Avenue, which would include the development of a new segment of the Cross Alameda Trail (CAT) to connect to the CAT trail segment that would transverse the planned 22-acre Jean Sweeney Open Space to the east of the site. The project would also develop a segment of the Bay Trail along the perimeter of the project site that would connect to other future segments bordering the Alaska Basin and Fortman Marina. In addition, the project may ultimately provide a transit connection to Oakland across the Oakland Estuary via a water shuttle or water taxi or ferry boat.

Based on the above, the proposed project would not divide an established community; rather, the proposed project would improve vehicular, bicycle, and pedestrian access in proximity to the site and provide new circulation routes within and potentially through the site to Oakland. Therefore, impacts related to physical division of an established community would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Impact 4.C-2: The proposed project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the General Plan and zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

According to *The General Plan Guidelines* published by the State Office of Planning and Research (OPR), a general rule for consistency determinations can be stated as follows: “An action, program, or project is consistent with the general plan if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment.”

The City Council, as the legislative body of the City of Alameda, is ultimately responsible for determining whether an activity is consistent with the Alameda General Plan. Perfect conformity with a general plan is not required. Instead, the City Council must balance various competing considerations and may find overall consistency with the General Plan despite potential inconsistencies with some individual provisions. The potential inconsistencies with General Plan goals, objectives, and policies do not themselves create a significant environmental impact under the thresholds established in CEQA *Guidelines* Appendix G, because not all land use goals and policies at issue are “adopted for the purpose of avoiding or mitigating an environmental effect.” These policies are, instead, expressions of community planning and organization preferences, and

the City of Alameda may modify these preferences without necessarily creating a significant adverse impact on the environment.

The proposed uses on the site would be consistent with nearby existing neighboring residential uses, as well as future mixed use developments that would be similar in character to the proposed project. Future residential, commercial, and recreational uses on the site would not change the character of the neighborhood in a negative way because these uses are intended to foster a pedestrian-friendly, transit-oriented environment envisioned in the Northern Waterfront GPA. The proposed project would provide additional commercial amenities and recreational opportunities for the adjacent community. The Northern Waterfront GPA represents a transition away from the area's historically industrial uses in favor of residential, commercial, open space and waterfront recreational uses. The proposed project is, therefore, compatible with the existing and planned land use within the surrounding area.

Consistent with the GPA EIR, the proposed project would support the intent of the current City of Alameda General Plan. In particular, the project would be consistent with the General Plan's policies for waterfront sites, mixed use housing development, shoreline access, and policies regarding architectural resources and historic resources. The GPA EIR indicated that if the Encinal Terminals project required relocation of the tidelands to accommodate the site plan and non-tidelands compliant uses, then a tideland exchange would need to be accomplished through enactment of State legislation (City of Alameda, 2006). As described in Section 2, *Project Description*, and consistent with the GPA EIR, the City of Alameda would work with the State Lands Commission and North Waterfront Cove LLC to reach agreement on a land exchange that involves the parcel leased from CSLC for the proposed publicly accessible promenade along the western side of the property adjacent to the Alaska Basin and the northern edge along the Oakland/Alameda Estuary. If the land exchange is not approved, the project site would be developed with the same mix of uses as the proposed project, but in a different configuration that is consistent with the uses allowed in the tidelands, as specified by the Master Plan.

As discussed above, *Plan Bay Area* identifies the project site within the Northern Waterfront PDA area. The vision for the PDA aligns with that contained in the Northern Waterfront GPA; as such, the project as proposed is also consistent with the description in *Plan Bay Area*, and the anticipated population and housing growth projections for the site and surrounding area.

The proposed project would be consistent with the policies from the Transportation Element because it would encourage mixed-use development with transit access, including a potential water taxi, as well as increase bicycle and pedestrian amenities. The proposed project's potential impacts to vehicular traffic, transit, bicycle, and pedestrian circulation and safety are discussed in Section 4.G, *Transportation and Circulation*.

The consistency of the proposed project with policies applicable to biological resources are contained in Section 4.B, *Biological Resources*. The project site is located on the shores of the Oakland Estuary and proximate to the San Francisco Bay. Onsite vegetation and stormwater best-management practices would be included in the project, and the proposed project would be consistent with the Open Space and Conservation Element policies. Please see Sections 4.B,

Biological Resources and the *Hydrology and Water Quality* section of the Initial Study (Appendix A) for further discussion of these measures.

The proposed project would expand access to the shoreline and provide new public open spaces by creating a passive and active recreational opportunities on-site, including waterfront-recreational opportunities. The proposed project would therefore be consistent with the applicable policies of the Parks and Recreation, Shoreline Access, Schools and Facilities Element.

The proposed project would be required, through existing City and State health and safety regulations, codes and ordinances, to comply with the Health and Safety Element policies. The proposed project would, therefore, be consistent with the Health and Safety Element. Noise impacts are addressed in Section 4.D. Impacts related to seismic events, flooding, and hazardous materials are discussed in the Initial Study (Appendix A).

Buildout pursuant to the Master Plan would provide up to 589 units of housing intended for households at a range of income levels. As discussed in the *Population and Housing* section of this EIR (Section 4.E), development that would occur under the proposed project would help Alameda accommodate anticipated growth as opposed to substantially increasing population, and the residential development that would occur under the proposed project would help to meet housing demands from projected population growth in the City and the region.

The project site is within the jurisdiction of the San Francisco Bay Conservation and Development (BCDC) San Francisco Bay Plan since the northern, western, and eastern edges are within the 100-foot shoreline band. Because a portion of the project site lies within BCDC jurisdiction, development would be subject to the *San Francisco Bay Plan*. Buildout of the proposed waterfront improvements and Alaska Basin marina—including dredging, piers, and piling for the marina—would require BCDC review and permit approval. The project would also be subject to BCDC review to ensure that adequate public access to and along the shoreline has been incorporate. BCDC would rely upon information in the EIR but would make separate consistency findings with respect to its own plan.

As described in the GPA EIR, the proposed project would be expected to comply with all applicable BCDC permitting policies. Implementation of the proposed project would allow better and easier public access to the shoreline by establishing a boardwalk/promenade that facilitates and encourages public access to the shoreline. Therefore, implementation of the proposed project would be consistent with the BCDC San Francisco Bay Plan and policies.

The proposed waterfront promenade would serve as a recreational trail, that would connect to the existing trail segment near the office park opposite of the Alaska Basin. As such, the project would be consistent with Bay Trail Plan policies for protecting existing trail segments and expanding proposed trail links along the San Francisco Bay.

The current proposal includes a proposal to exceed the height limit for the site established by General Plan policies (See Policy ET 10.8.e). The applicant has submitted a request for density bonus and a height limit exemption pursuant to the State of California and City of Alameda Density Bonus Law. The project is eligible for the waiver of the height limit due to its inclusion

of additional affordable housing units within the project. Although the waiver may be necessary, such a waiver would not result in a conflict with a policy adopted for the purpose of “avoiding or mitigating an environmental effect” because a building over 60 feet in height does not in and by itself automatically result in an environmental impact. The subject policies were originally adopted to create a consistent architectural massing with the nearby Wind River office campus, not for the purpose of protecting the environment. Therefore, a conflict with Policy ET 10.8.e would not be considered a significant environmental impact.

Conclusion

Conflicts with a General Plan or other relevant plans do not necessarily result in a significant effect on the environment within the context of CEQA. Section 15358(b) of the CEQA Guidelines states that “effects analyzed under CEQA must be related to a physical change.” Appendix G of the CEQA Guidelines makes explicit the focus on physical environmental policies and plans, asking whether the project would “conflict with any applicable land use plan, policy, or regulation.... *adopted for the purpose of avoiding or mitigating an environmental effect*” (emphasis added). Hence, the project’s conflict or inconsistency with the policy could indicate that an environmental threshold has been exceeded. To the extent that the project exceeds an environmental threshold and significant physical impacts may result from a policy conflict or inconsistency, such physical impacts have been identified and fully analyzed in the relevant topical sections of this EIR.

The physical environmental effects of the proposed project, including the proposed General Plan amendment, and associated increases in development, such as increased traffic, noise, air emissions, habitat degradation, visual resources effects and hydrologic impacts, are discussed in their respective sections in this EIR. Assuming approval and adoption of the proposed project and General Plan Amendment described above, the project would be consistent with the applicable land use plans and policies and there would be a less-than-significant land use impact. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Impact 4.C-3: The proposed project would not conflict with an applicable Habitat Conservation Plans or Natural Community Conservation Plans. (No Impact)

There are no Habitat Conservation Plans or Natural Community Conservation Plans adopted for the project area. Therefore, there would be no conflict with any such plan, and there would be no impact.

Mitigation: None required.

Cumulative Impact

Impact 4.C-4: The proposed project, combined with cumulative development in the defined geographic area, including past, present, reasonably foreseeable future development, would not have significant adverse cumulative land use impacts. (Less than Significant)

The geographic context considered for cumulative land use impacts include the City of Alameda and surrounding area that, when combined with the proposed project, could result in cumulative land use, plans, and policy impacts. Past projects are included in the existing setting described in this section and in the introduction for this chapter. Present projects would include any projects currently under construction and reasonably foreseeable future projects are those that could be developed or occur in the project site area by buildout of the City of Alameda General Plan.

As concluded in this section, the proposed project would result in less-than-significant impacts with respect to: physically dividing an established community, conflicting with any land use plan, policy or regulation adopted for purposes of avoiding or mitigating an environmental effect, and conflicting with a habitat conservation plan. The proposed project site is primarily self-contained, because it is bounded by roadways to the south, the Oakland Estuary to the north, the Alaska Basin to the west, and the Fortman Marina to the east.

Land use impacts from the proposed project are local and limited to the project site. The area to the south, east, and west of the project site is generally built out pursuant to the General Plan with a mix of residential and commercial land uses. Although redevelopment of the project site would increase the intensity of commercial, industrial, residential, and recreational uses, these uses would not combine with the developments above to result in cumulative impacts related to physical division of an established community. To the contrary, the cumulative effect of these development projects would be to integrate existing underutilized sites into the larger city fabric, and the projects would improve accessibility and land use compatibility compared to existing conditions. The cumulative impact would be less than significant.

Regarding consistency with plans and policies, future development within the project must be consistent with the City's General Plan and other applicable land use plans and requirements. The cumulative projects also would be subject to the General Plan, Specific Plan (if applicable) and the Zoning Ordinance to ensure land use compatibility. Like the proposed projects, other projects would need to conduct biological resource surveys and implement mitigation measures to ensure development facilitated by the proposed project reduces potential impacts to the maximum extent feasible, which would also ensure future projects are developed in a manner consistent with the Comprehensive Conservation Management Plan (CCMP) for the San Francisco Bay Estuary, as discussed under Impact 4.C-3. The proposed project would not combine with other developments to result in a significant cumulative land use impact associated with conflicts with plans and policies. As described above, the General Plan would be amended under the proposed project to ensure consistency with applicable policies.

Therefore, it is not anticipated that the proposed project, together with other past, present or reasonably foreseeable future development in the area, would result in a cumulative impact with respect to conflicts with land use, plans and policies adopted for the purpose of avoiding or

mitigating an environmental effect. Thus, the proposed project would not result in a significant cumulative land use impact.

Mitigation: None required.

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D. Noise and Vibration

D.1 Introduction

This section provides an overview of the existing noise and vibration environment at the proposed project site and surrounding area, the regulatory framework as it relates to noise and vibration, an analysis of potential noise and vibration impacts that would result from implementation of the proposed project, and mitigation measures where appropriate.

D.2 Environmental Setting

Technical Background

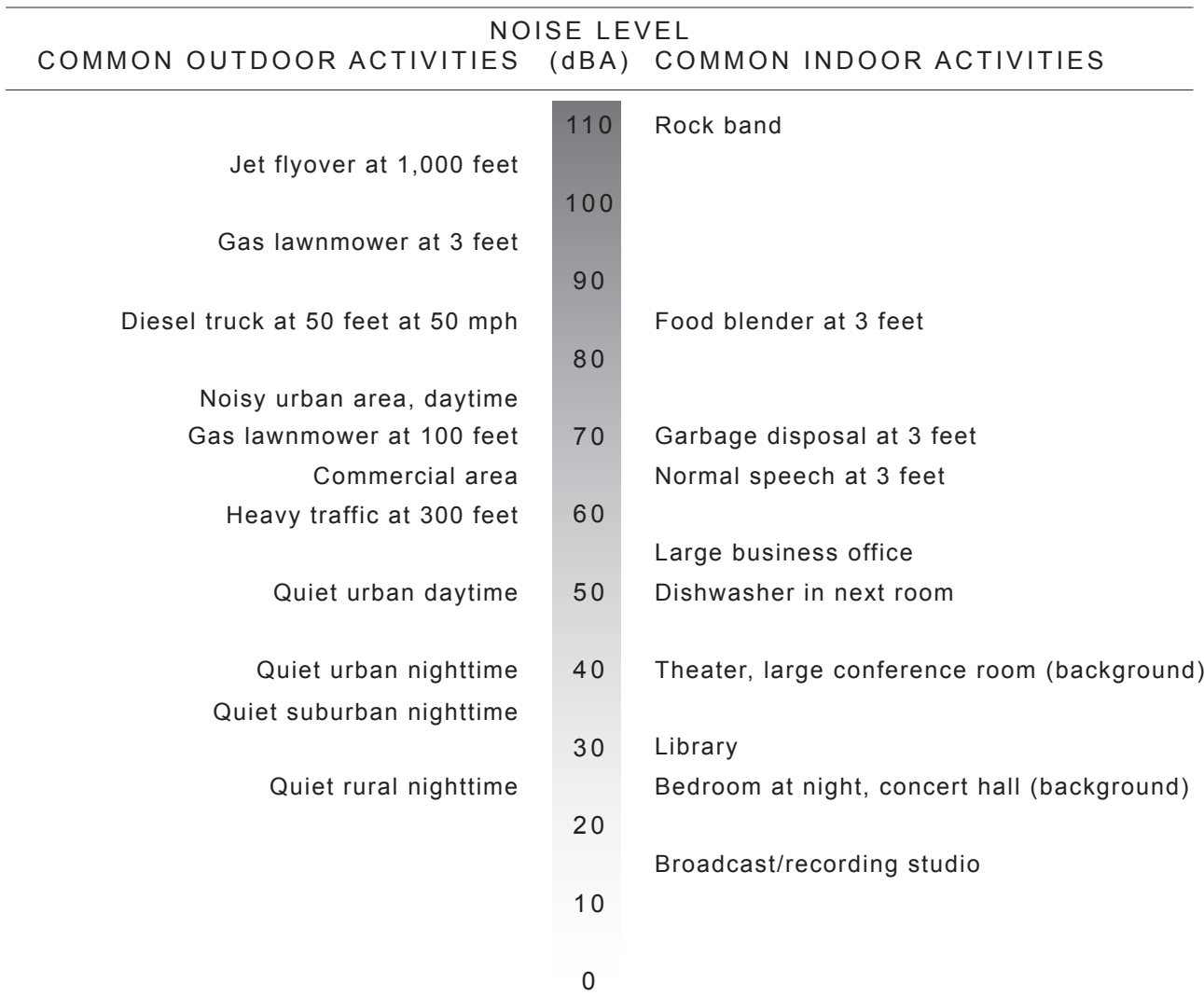
Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 4.D-1**.

Noise Exposure and Community Noise

Noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor.



SOURCE: Caltrans, 1998

Figure 4.D-1
Typical Noise Levels

These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

Leq: the energy-equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The Leq is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

Lmax: the instantaneous maximum noise level for a specified period of time.

L₅₀: the noise level that is equaled or exceeded 50 percent of the specified time period. The L₅₀ represents the median sound level.

L₉₀: the noise level that is equaled or exceeded 90 percent of the specific time period. This is considered the background noise level during a given time period.

DNL: Also abbreviated Ldn, it is a 24-hour day and night A-weighted noise exposure level which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.

CNEL: similar to DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dB “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dB penalty between the hours of 10:00 p.m. and 7:00 a.m.

As a general rule, in areas where the noise environment is dominated by traffic, the Leq during the peak-hour is generally within one to two decibels of the Ldn at that location.

Effects of Noise on People

When a new noise is introduced to an environment, human reaction can be predicted by comparing the new noise to the existing “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur (Caltrans, 2013):

- except in carefully controlled laboratory experiments, a change of 1-dB cannot be perceived;
- outside of the laboratory, a 3-dB change is considered a just-perceivable difference;
- a change in level of at least 5-dB is required before any noticeable change in human response would be expected; and
- a 10-dB change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion, hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans, 2013).

Fundamentals of Vibration

As described in the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment (FTA, 2006), ground-borne vibration can be a serious concern for nearby neighbors, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses on rough roads, and construction activities such as blasting, sheet pile-driving and operating heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is the commonly used metric to describe RMS amplitude. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, students, the elderly and sick), and vibration sensitive equipment.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and sheet pile-driving during construction.

Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV and the FTA threshold of human annoyance to ground-borne vibration is 80 Vdb (FTA, 2006).

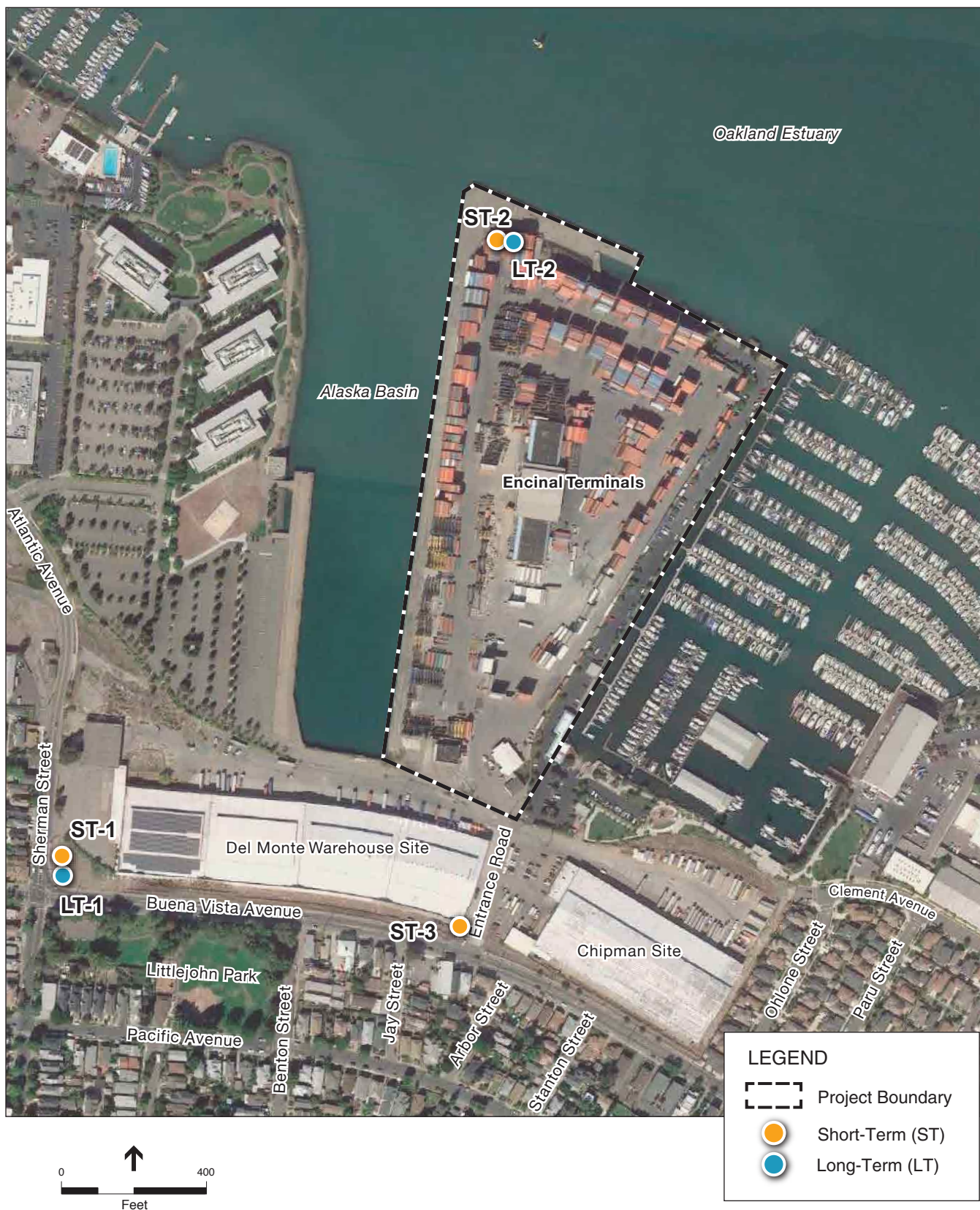
Existing Noise Setting

As described in the GPA EIR, the noise environment surrounding the project site is influenced primarily by aircraft and surface traffic noise, as well as industrial uses on both sides of the Oakland Estuary. The highest surface street noise levels in the vicinity of the project site occur on Buena Vista Avenue, Clement Avenue, Entrance Road, Grand Street, and Sherman Street. As indicated in the GPA EIR, Charles M. Salter Associates conducted a noise study in 2003, which consisted of one long-term and one short-term noise measurement. One of the noise measurement sites was located in close proximity to the proposed project, at Buena Vista Avenue and Sherman Street. Environmental Science Associates (ESA) conducted a second noise survey in 2013 to update the ambient noise levels in and around the project site. The noise survey was conducted from April 19, 2013 through April 23, 2013 and consisted of two short-term noise measurements and one long-term noise measurement. The locations of these noise measurements and associated results can be found in Figure 4.D-1 and **Table 4.D-1**, respectively.

**TABLE 4.D-1
SOUND-LEVEL MEASUREMENTS NEAR THE PROPOSED PROJECT**

Location	Time Period	Result	Noise Sources
<u>Long-Term - 1: Buena Vista Ave and Sherman Street.</u> About 50' north of Buena Vista centerline, 40' east of Sherman St centerline, 12' elevation	October 16-17, 2003 2:00 p.m. to 2:00 p.m.	71 dBA CNEL	<ul style="list-style-type: none"> Unattended long-term measurement
<u>Long-Term -2: Northeast Boundary of Project Site.</u> Adjacent to Oakland Estuary. 5' elevation	April 21-23, 2013 12:00 a.m. to 12:00 a.m.	April 21: 57 dBA CNEL April 22: 59 dBA CNEL April 23: 59 dBA CNEL	<ul style="list-style-type: none"> Unattended long-term measurement
<u>Short-Term-1: Buena Vista Ave and Sherman Street.</u> About 65' north of Buena Vista centerline, 170' east of Sherman centerline, 5' elevation	October 17, 2003 2:45 p.m. to 3:00 p.m.	15-minute result: Leq = 62 dBA	<ul style="list-style-type: none"> None specifically listed
<u>Short-Term-2: Northeast Boundary of Project Site.</u> Adjacent to Oakland Estuary. 5' elevation	April 19, 2013 4:31 p.m. to 4:36 p.m.	5-minute result: Leq = 47.7 dBA Lmax = 61.1 dBA	<ul style="list-style-type: none"> Small motorboat Pedestrians talking Airplane flyover
<u>Short-Term-3: Buena Vista Ave and Entrance Road.</u> About 50' north of Buena Vista Ave centerline, 25' west of Entrance Rd centerline, 5' elevation	April 19, 2013 4:42 p.m. to 4:47 p.m.	5-minute result: Leq = 62.5 dBA Lmax = 70.6 dBA	<ul style="list-style-type: none"> Traffic on Buena Vista Ave and Entrance Rd (primarily Buena Vista Ave) Pedestrians talking Birds chirping

SOURCES: ESA, 2013; GPA EIR



SOURCE: ESA

Encinal Terminals . 130007

Figure 4.D-2
Noise Monitoring Locations

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than are commercial (other than lodging facilities) and industrial land uses. Sensitive receptors in the vicinity of the project include residences along Clement Avenue, with the nearest about 100 feet south of the project. Other residences are located along Buena Vista Avenue about 400 feet south of the project site, and other residences can be found along Ohlone Street (nearest approximately 770 feet east of the project), and along Sherman Street (nearest approximately 950 feet west of the project). It is also likely that there are live-aboard boats docked in the Fortman Marina east of the site, with the closest berths approximately 120 feet from the project site. Other existing receptors include Littlejohn Park (about 465 feet southwest of the project). Finally, several planned residential uses are within close proximity to the project, including the Del Monte project, which is directly across Clement Avenue from the project site.

D.3 Regulatory Framework

Federal

The FTA has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. The vibration damage criteria adopted by the FTA are shown in **Table 4.D-2**.

**TABLE 4.D-2
CONSTRUCTION VIBRATION DAMAGE CRITERIA**

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

SOURCE: FTA, 2006.

In addition, the FTA has also adopted standards associated with human annoyance for ground-borne vibration impacts for the following three land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional. The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches,

other institutions, and quiet offices that do not have vibration-sensitive equipment but still have the potential for activity interference. The vibration thresholds associated with human annoyance for these three land-use categories are shown in **Table 4.D-3**. No thresholds have been identified or recommended specific to commercial and office uses, although Category 3 standards may be applied as they are defined as land uses with primarily daytime and evening use. Because the project-induced vibration would be from impact pile driving activities, the impact thresholds for the proposed project would be based on Frequent Events as stated in Table 4.D-3.

TABLE 4.D-3
GROUND-BORNE VIBRATION IMPACT CRITERIA FOR GENERAL ASSESSMENT

Land Use Category	Frequent Events ^a	Occasional Events ^b	Infrequent Events ^c
Category 1: Buildings where vibration would interfere with interior operations	65 VdB ^d	65 VdB ^d	65 VdB ^d
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

^a Frequent Events" is defined as more than 70 vibration events of the same source per day.

^b Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

^c Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.

^d This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.

SOURCE: FTA, 2006.

State

The State of California does not have statewide standards for environmental noise, but the California Department of Health Services (DHS) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise compatibility by different land uses types is categorized into four general levels: "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable." For instance, a noise environment ranging from 50 dBA CNEL to 65 dBA CNEL is considered to be "normally acceptable" for multi-family residential uses, while a noise environment of 75 dBA CNEL or above for multi-family residential uses is considered to be "clearly unacceptable." In addition, Section 65302(f) of the California Government Code requires each county and city in the state to prepare and adopt a comprehensive long-range General Plan for its physical development, with Section 65302(g) requiring a Noise Element to be included in the General Plan. The Noise Element must: (1) identify and appraise noise problems in the community; (2) recognize Office of Noise Control guidelines; and (3) analyze and quantify current and projected noise levels.

The California Noise Act of 1973 (Health and Safety Code Sections 46000–46002) sets forth a resource network to assist local agencies with legal and technical expertise regarding noise issues. The objective of the act is to encourage the establishment and enforcement of local noise ordinances.

The State has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of DNL 45 dBA in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dBA. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

Local

City of Alameda General Plan

The City of Alameda General Plan (City of Alameda, 1991) is the principal policy document for guiding future conservation and development within the City. It represents the framework on which the City must base decisions regarding growth, public services and facilities, and protection and enhancement of the community).

The General Plan establishes comprehensive, long-term land use policies for the City. Consistent with state law, the General Plan includes the Land Use Element; City Design Element; Transportation Element; Open Space and Conservation Element; Parks and Recreation, Shoreline Access, Schools and Cultural Facilities Element; Airport Environs Element (relates to Metropolitan Oakland International Airport); Health and Safety Element; and Housing Element; along with a specific element pertaining to the Northern Waterfront.

The Health and Safety Element includes the following noise policies that would be applicable to the project:

Guiding Policies:

- Minimize vehicular and stationary noise sources, and noise emanating from temporary activities. (*Policy 8.7.a*)
- Require site and building design to achieve noise compatibility to the extent feasible. (*Policy 8.7.b*)
- Recognize that residential, school, hospital, church, or public library properties in commercial areas and commercial development in industrial areas will be subject to noise levels associated with noisier permitted uses. (*Policy 8.7.c*)
- Maintain efforts to mitigate impacts of aircraft noise while pursuing actions to reduce aircraft noise or avoid noise increases. (*Policy 8.7.d*)

Implementing Policies:

- Require acoustical analysis for new or replacement dwellings, hotels, motels, and schools within the projected 60 dB contour. Single-family dwellings not constructed as part of a subdivision requiring a final map require acoustical analysis only within the projected 65 dB contour. (*Policy 8.7.e*)
- Require new or replacement dwellings, hotels, motels, and schools within the noise impact areas described in Policy 8.7.e, above, to limit intruding noise to 45 dB CNEL

in all habitable rooms. In new dwellings subject to a noise easement, noise is not to exceed 40 dB CNEL in habitable rooms. If this requirement is met by inoperable or closed windows, a mechanical ventilation system meeting Uniform Building Code requirements must be provided.¹ (*Policy 8.7.f*)

- Minimize the impact of aircraft, railroad, and truck noise by requiring that noise levels caused by single events be controlled to 50 dB in bedrooms and 55 dB in living areas within the 60 dB contour. (*Policy 8.7.g*)
- In making a determination of impact under the California Environmental Quality Act (CEQA), consider the following impacts to be "significant":
 - An increase in noise exposure of 4 or more dB if the resulting noise level would exceed that described as normally acceptable for the affected land use, as indicated in Table 8-1.
 - Any increase of 6 dB or more, due to the potential for adverse community response. (*Policy 8.7.h*)
- Continue to enforce the Community Noise Ordinance. (*Policy 8.7.i*)
- Maintain day and nighttime truck routes that minimize the number of residents exposed to truck noise. (*Policy 8.7.l*)

Northern Waterfront General Plan Amendment

This amendment addresses the redevelopment of the Northern Waterfront planning area, inclusive of the project site. The element contains a single policy with respect to noise.

10.8.e. Prohibit the use of sound walls within the Plan area. New development should be designed and new streets should be engineered to minimize noise impacts and eliminate the need for sound walls.

City of Alameda Municipal Code

The following sections of the City of Alameda Municipal Code are relevant to the project.

- In the event the measured ambient noise level exceeds the applicable noise level standard in any category in **Table 4.D-4**, the applicable standards shall be adjusted so as to equal said ambient noise level (Section 4.10-4(c)).
- Each of the noise level standards specified in Table 4.D-4 shall be reduced by five (5) dB(A) for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises (Section 4.10-4(d)).
- If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the applicable noise level standards in Table 4.D-4 (Ord. No. 2177 N.S.) (Section 4.10-4(e)).

¹ As described in the City General Plan Health and Safety Element (1991), an average house with no special noise control provisions reduces noise by 15 to 20 dBA with the windows partially open. Sealed windows, weatherstripping, and solid core doors can add 15 dBA reduction. Therefore, 45 dB interior CNEL can be achieved at up to 75 dB exterior CNEL. However, single events such as aircraft flyovers could require greater reductions at some locations to comply with Policy 8.7.f.

- Construction noise is exempted from the noise standards provided it is limited to between the hours of 7:00 am and 7:00 pm Monday through Friday and 8:00 am to 5:00 pm on Saturdays. (Section 4-10.5(b)10)

**TABLE 4.D-4
CITY OF ALAMEDA EXTERIOR NOISE STANDARDS**

Location	Cumulative Number of Minutes in Any One Hour Time Period	7:00 am to 10:00 pm Standard (dBA)	10:00 pm to 7:00 am Standard (dBA)
Single or Multiple Family Residential, School, Hospital, Church, or Public Library Properties	30	55	50
	15	60	55
	5	65	60
	1	70	65
	0	75	70
Commercial Properties	30	65	60
	15	70	65
	5	75	70
	1	80	75
	0	85	80

SOURCE: City of Alameda, 2012

D.4 Impacts and Mitigation Measures

Significance Criteria

Based on the *CEQA Guidelines*, a project would have a significant effect on the environment with respect to noise and/or ground-borne vibration if it would result in:

- Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- Exposure of people residing or working in the area around the project site to excessive noise levels (for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport);
- Exposure of people residing or working in the area around the project site to excessive noise levels (for a project within the vicinity of a private airstrip); or
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.

There are no public airports or private airstrips within two miles of the project site. The nearest airport is the Oakland International Airport, which is approximately three miles southeast of the project. There is an existing helipad located on Coast Guard Island located approximately 1,800 feet north of the proposed project site. The operations and frequency of use of this helipad is highly variable. A recent California Supreme Court case found that “agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project’s future users or residents.” In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore concerned with a project’s impact on the environment, rather than with the environment’s impact on a project and its users or residents. Since there are no public airports or private airstrips within two miles of the project and the existing helipad located on Cost Guard Island is considered as a part of the existing environment, aircraft related noise would not be a significant impact for land uses to be developed under the proposed project, and this significance criterion is not discussed further.

For the purpose of this analysis, the proposed project is considered to result in significant impacts on the environment if it would generate noise or vibration levels in excess of the following thresholds:

Construction Noise. The project would result in a significant construction impact if construction activity would occur outside of the allowable daytime hours specified by the City noise ordinance.

Vibration. Since the City does not have any regulations pertaining to vibration, the FTA thresholds are applied to the project. The project would result in a significant vibration impact if buildings would be exposed to the FTA vibration threshold level of 0.2 PPV for building damage, or if sensitive individuals would be exposed to the FTA vibration threshold level of 72 VdB for human annoyance outside of the allowable daytime hours specified by the City noise ordinance.

Stationary Noise. The City of Alameda noise standards for stationary sources described in Table 4.D-4 have been applied to non-transportation sources associated with project operations. For the nearest sensitive receptors, a resulting offsite noise level from stationary non-transportation sources that exceeds 55 dBA Leq in the daytime (7:00 a.m. to 10:00 p.m.) or 50 dBA Leq in the nighttime (10:00 pm to 7:00 a.m.) at the receiving land use would be considered significant.

Traffic Noise. The significance of project-related traffic noise impacts can be determined by comparing estimated traffic noise levels with the project to existing noise levels without the project. Per policy 8.7.h of the City of Alameda General Plan Health and Safety Element (1991), the significance criteria for changes in noise from project operational traffic are as follows:

1. A 4 dB increase in CNEL as a result of project operations if the resulting noise level would exceed that described as normally acceptable for the affected land use (60 dBA DNL or less for residential uses).
2. Any CNEL increase of 6 dB or more, due to the potential for adverse community response.

Approach to Analysis

Construction Noise Levels

Noise impacts are assessed based on a comparative analysis of the noise levels resulting from construction and the noise levels of existing conditions. Analysis of temporary construction noise effects is based on typical construction phases and equipment noise levels and attenuation of those noise levels due to distances between the construction activity and the sensitive receptors in the site vicinity. Construction noise levels for the proposed project were estimated using published noise data for typical individual pieces of equipment from the FTA. The project would result in a violation of the City's noise standards if construction activity would occur outside of the allowable daytime hours specified by the City noise ordinance. Specifically, construction noise is exempted from the noise standards provided it is limited to between the hours of 7:00 am and 7:00 pm Monday through Friday and 8:00 am to 5:00 pm on Saturdays.

Roadway Noise Levels

Roadway noise levels under existing and cumulative with and without project conditions were calculated for selected roadway segments near the project site based on information provided in the traffic study for the proposed project. The roadway segments selected for analysis are expected to be most directly impacted by project-related traffic, which, for the purpose of this analysis, includes the streets that are nearest to the project site that also experiences the highest traffic volumes. These roadways, when compared to other roadways located further away from the project site, would experience the greatest percentage increase in traffic generated by the proposed project. The noise levels were calculated through the use of California Vehicle Noise Reference Energy mean Emission Levels (Calven REMELS) and traffic data found in the project's transportation analysis (see Section 4.G, *Transportation and Circulation*).

Per policy 8.7.h of the City of Alameda General Plan Health and Safety Element (1991), traffic noise is considered significant if the incremental increase in noise is 4 dB or more if the resulting noise level would exceed that described as normally acceptable for the affected land use (60 dBA DNL or less for residential uses) or if the noise level increased by 6 dB in any noise environment.

Groundborne Vibration Levels

Groundborne vibration levels resulting from construction activities at the project site were estimated using data published by the FTA in its *Transit Noise and Vibration Impact Assessment* (2006) document. Potential vibration levels resulting from project construction are identified for off-site locations that are sensitive to vibration, including existing residences located nearby, based on their distance from construction activities.

Northern Waterfront GPA EIR

The GPA EIR concluded that buildout of the Northern Waterfront GPA could result in potentially significant impacts from noise or vibrations caused by demolition, construction, and remodeling activities. Implementation of the Northern Waterfront GPA could cause potentially significant impacts by exposing existing and/or new residences to noise from stationary sources from new

development that exceeds acceptable levels, and by significantly increasing noise levels along Clement Avenue and Grand Street. Since the GPA EIR was a programmatic analysis, projects proposed within the Northern Waterfront GPA are subject to a project-level review for noise-related impacts, which is included below.

A number of GPA EIR mitigation measures would apply to the proposed project. **Mitigation Measure NOISE-1a** requiring development-specific noise reduction plans, would apply to the proposed project, as would **Mitigation Measure NOISE-2a**, requiring acoustical studies, **Mitigation Measure NOISE 2-b** relating to compliance with the City's Noise Ordinance, and **Mitigation Measure NOISE-3** also relating to acoustical studies. **Mitigation Measure NOISE-1b**, related to pile driving would also apply to the proposed project, as pile driving would be a method used as part of project construction. Each of these mitigation measures have been modified below as part of this analysis to address project specific impacts.

Effects Found Not to be Significant

The GPA found that proposed project's within the GPA planning area would have no impact related to the following significance criteria:

- **For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels; and For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.** There are no public airports or private airstrips within two miles of the project site. The nearest airport is the Oakland International Airport, which is approximately three miles southeast of the project. Since there are no public airports or private airstrips within two miles of the project, aircraft related noise would not be a significant impact for land uses to be developed under the proposed project, and this significance criterion is not discussed further. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

As previously discussed, the California Supreme Court has recently held that CEQA does not require an EIR to consider effects of the existing environment on the future project, including such effects as exposure of future residents to existing helicopter noise from the helipad located on Coast Guard Island located approximately 1,800 feet north of the proposed project site. Therefore, this effect is not discussed further.

Impact Analysis

Impact 4.D-1: Construction of proposed project elements could expose persons to or generate noise levels in excess of the City noise standards or result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant with Mitigation)

Noise levels from construction activity at receptors near the construction areas within the project site would fluctuate depending on the particular type, number, and duration of usage of various

pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. **Table 4.D-5** shows typical noise levels produced by various types of construction equipment. Pile driving would be required for development of the marina, which would be located in the Alaska Basin (along the western edge of the project site).

**TABLE 4.D-5
TYPICAL NOISE LEVELS FROM DEMOLITION/
CONSTRUCTION EQUIPMENT OPERATIONS**

Construction Equipment	Noise Exposure Level, dBA @ 50 Feet
Air Compressor	81
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Compactor	82
Concrete Mixer (Truck)	85
Concrete Pump (Truck)	82
Concrete Vibrator	76
Crane-Derrick	88
Crane-Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	85
Paver	89
Pile-driver (Impact)	101
Pile-driver (Sonic)	96
Pneumatic Tool	85
Pump	76
Roller	74
Saw	76
Scarifier	83
Scraper	89
Shovel	82
Heavy Diesel Truck	88

SOURCES: Federal Transit Administration, 2006.

The loudest source of noise during project construction would be generated through use of an impact pile driver, which would be required particularly along the western and northern portions of the project site. The nearest existing offsite residential uses would be located approximately 550 feet south from where impact pile driving would occur. Assuming an attenuation rate of 6 dB per doubling of distance, the nearest existing residential receptors located 550 feet south from impact pile driving activities would experience exterior noise levels of up to 80 dBA during impact pile driving. These noise levels would be substantially greater than the existing ambient noise environment at the receptors.

The project would result in a violation of the City's noise standards if construction activity would occur outside of the allowable daytime hours specified by the City noise ordinance. Specifically, construction noise is exempted from the noise standards provided it is limited to between the hours of 7:00 am and 7:00 pm Monday through Friday and 8:00 am to 5:00 pm on Saturdays.

Although construction activities associated with the project would be temporary in nature and the maximum noise levels discussed above would be short-term, noise generated during project construction would temporarily elevate ambient noise levels in and around the project area. However, implementation of GPA EIR **Mitigation Measure NOISE-1a** and GPA EIR **Mitigation Measure NOISE-1b** (both modified as shown by underline below) would require the applicant to adhere to the City's except hours and create and implement a development-specific noise reduction plan.

With implementation of GPA EIR Mitigation Measures NOISE-1a and Mitigation Measure NOISE-1b, this impact would result in a less than significant impact. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

GPA EIR Mitigation Measure NOISE-1a (revised): ~~Developers and/or contractors~~ The applicant shall create and implement development-specific noise and vibration reduction plans, which shall be enforced via contract specifications. Contractors may elect any combination of legal, non-polluting methods to maintain or reduce noise and vibration to threshold levels or lower, as long as those methods do not result in other significant environmental impacts or create a substantial public nuisance. In addition, the applicant shall require contractors to limit construction activities to daytime hours between 7:00 am and 7:00 pm Monday through Friday and 8:00 am to 5:00 pm on Saturdays. The plan for attenuating construction-related noises shall be implemented prior to the initiation of any work that triggers the need for such a plan.

GPA EIR Mitigation Measure NOISE-1b (revised): To reduce pile driving noise, "vibratory" pile driving or drilled and cast-in-place piles should be used wherever feasible. The vibratory pile driving technique, despite its name, does not generate vibration levels higher than the standard pile driving technique. It does, however, generate lower, less-intrusive noise levels.

Significance after Mitigation: Less than Significant.

Impact 4.D-2: Construction facilitated by the proposed project could potentially result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (Less than Significant with Mitigation)

Since the City does not have specific regulations pertaining to vibration, the FTA thresholds for building damage and annoyance have been applied to the project. The project would result in a significant vibration impact if buildings would be exposed to the FTA vibration threshold level

of 0.2 in/sec PPV for building damage, or if sensitive individuals would be exposed to the FTA vibration threshold level of 72 VdB for human annoyance. Vibration impacts are considered below for project construction only, since no major vibration sources would be associated with project operations.

The highest source of vibration during project construction would be generated during impact pile driving. According to the FTA's *Transit Noise and Vibration Impact Assessment*, use of an impact pile driver could generate vibration levels up to 0.644 in/sec PPV and 104 VdB RMS at a distance of 25 feet (FTA, 2006). The nearest sensitive land use to the project site are residential receptors located approximately 550 feet south from where impact pile driving would occur. Assuming an impact pile driver would be used approximately 550 feet from the nearest residential receptor, these residential receptors would be exposed to vibration levels of 0.006 in/sec PPV and 64 VdB RMS, which would not exceed the FTA impact criteria for both building damage and human annoyance (see Table 4.D-2 and Table 4.D-3). This impact would result in a less than significant impact.

Significance after Mitigation: Less than Significant.

Impact 4.D-3: Transportation-related operations facilitated by the proposed project could result in a substantial permanent increase in ambient noise levels in the vicinity or above levels existing without the project. (Less than Significant with Mitigation)

Stationary Noise

New retail and residential uses to be developed under the project could produce stationary-source noise (such as HVAC, loading docks, etc.) that could potentially affect existing or proposed noise-sensitive receptors, which is the same finding as the GPA EIR. However, as previously analyzed in the GPA EIR, stationary sources associated with these land uses would be minor and the project would be subject to the City's Noise Ordinance and the policies included in the City General Plan. Implementation of GPA EIR (and modified as shown by underline below)

Mitigation Measures NOISE-2a and NOISE-2b would ensure compliance with the applicable standards and would reduce this impact to less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Traffic Noise

Most of the noise generated by the development facilitated by the proposed project would be traffic-generated noise. As discussed in Section 4.G, *Transportation and Circulation*, the estimated daily number of net new vehicle trips generated by the proposed project would be 3,922. These additional vehicle trips would be distributed across local roadways, and would result in higher noise levels than under existing conditions. The significance of project-related traffic noise impacts can be determined by comparing estimated traffic noise level increases resulting from

the project relative to baseline noise levels without the project. Per policy 8.7.h of the City of Alameda General Plan Health and Safety Element (1991), the significance criteria for changes in noise from project operational traffic are as follows:

1. A 4 dB increase in CNEL as a result of project operations if the resulting noise level would exceed that described as normally acceptable for the affected land use (60 dBA DNL or less for residential uses).
2. Any CNEL increase of 6 dB or more, due to the potential for adverse community response.

Peak hour traffic noise projections were made using the California Vehicle Noise Reference Energy mean Emission Levels (Calvenio REMELS) and traffic data for the project for those road segments that would experience the greatest increase in traffic volume and that would pass through residential areas. According to Caltrans' *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (Caltrans, 2013), peak traffic noise levels are approximately equal to the CNEL/Ldn. The segments analyzed and results of the modeling are shown in **Table 4.D-6** for Existing Conditions, Existing plus Project, Cumulative, and Cumulative plus Project development conditions.

As shown in Table 4.D-6, the greatest effect on ambient traffic noise levels would occur along the project's western entrance road, north of Buena Vista Avenue, where traffic noise would increase by 9 dBA. All other roadways analyzed are expected to experience a traffic noise increases no greater than 1 dBA. This increase in traffic noise would exceed the City's maximum allowed noise standard for transportation sources. However, there are no existing sensitive receptors along the western entrance road, and construction of proposed residences at the nearby Del Monte and Marina Cove II project areas would address this potential cumulative noise impact through acoustical studies and facility designs, per GPA EIR **Mitigation Measures NOISE-2a, 2b, and -3**. As such, this is the same finding as that found in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Land Use Compatibility

As Table 4.D-1 shows, the southern portion of the project site area has an existing ambient noise environment greater than 60 dBA CNEL. Furthermore, traffic on adjacent streets would result in greater noise exposure in the future than traffic under existing conditions, as shown in Table 4.D-6. An exterior noise exposure of 60 dBA or greater would result in potentially incompatible interior noise for new sensitive receptors without mitigation. Residences to be developed as part of the project would be subject to the Alameda General Plan policy which requires an acoustical analysis for new or replacement dwellings and hotels, to limit intruding noise to 45 dBA CNEL in all habitable rooms. GPA EIR **Mitigation Measures NOISE-2a, -2b, and -3** (and modified as shown by underline below) would ensure compliance with the applicable standards and would reduce this impact to less than significant. This is the same finding as that found in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

**TABLE 4.D-6
SUMMARY OF TRAFFIC NOISE MODELING RESULTS AT 50 FEET FROM ROADWAY CENTERLINE**

Street Segment	Peak-Hour Noise Level, dBA, Leq ¹									
	Existing [A]	Existing Plus Project [B]	Incremental Increase [B-A]	Significant? (Yes or No) ²	Cumulative 2035 [C]	Cumulative 2035 Plus Project [D]	Incremental Increase vs Existing [D-A]	Cumulatively Significant? (Yes or No) ²	Incremental Increase vs Cum. 2035 [D-C]	Cumulatively Considerable? (Yes or No) ²
Webster Street										
South of Buena Vista Ave	0	0	0	No	0	0	0	No	0	No
North of Buena Vista Ave	62	62	0	No	64	64	2	No	0	No
South of Atlantic Ave	63	63	0	No	64	64	1	No	0	No
North of Atlantic Ave	64	64	0	No	64	64	0	No	0	No
South of Willie Stargell Ave	65	65	0	No	65	65	0	No	0	No
	64	65	1	No	66	66	2	No	0	No
Atlantic Avenue										
North of Webster St	0	0	0	No	0	0	0	No	0	No
East of Webster St	71	71	0	No	74	74	3	No	0	No
West of Constitution Wy	70	70	0	No	73	73	3	No	0	No
East of Constitution Wy	67	67	0	No	72	72	5	Yes	0	No
West of Challenger Dr	66	67	1	No	69	69	3	No	0	No
East of Challenger Dr	66	67	1	No	69	69	3	No	0	No
	69	70	1	No	72	72	3	No	0	No
Constitution Way										
South of Atlantic Ave	0	0	0	No	0	0	0	No	0	No
North of Atlantic Ave	72	72	0	No	71	71	-1	No	0	No
South of Marina Village Pkwy	72	72	0	No	71	71	-1	No	0	No
	72	72	0	No	72	73	1	No	1	No
Marina Village Blvd										
East of Constitution Wy	0	0	0	No	0	0	0	No	0	No
West of Marina Village Blvd	70	70	0	No	70	70	0	No	0	No
East of Marina Village Blvd	68	68	0	No	69	69	1	No	0	No
	64	64	0	No	66	66	2	No	0	No
Buena Vista Avenue										
West of Webster St	0	0	0	No	0	0	0	No	0	No
East of Webster St	65	65	0	No	66	66	1	No	0	No
West of Sherman St	64	64	0	No	65	65	1	No	0	No
East of Sherman St	65	66	1	No	67	67	2	No	0	No
West of Entrance Rd	69	70	1	No	70	70	1	No	0	No
East of Entrance Rd	73	73	0	No	72	73	0	No	1	No
West of Stanton St	73	73	0	No	73	73	0	No	0	No
East of Stanton St	70	71	1	No	71	71	1	No	0	No
West of Grand St	70	71	1	No	71	71	1	No	0	No
	69	70	1	No	69	69	0	No	0	No

TABLE 4.D-6 (Continued)
SUMMARY OF TRAFFIC NOISE MODELING RESULTS AT 50 FEET FROM ROADWAY CENTERLINE

Peak-Hour Noise Level, dBA, Leq ¹											
Street Segment	Existing	Existing Plus Project [B]	Incremental Increase		Significant? (Yes or No) ²	Cumulative 2035	Cumulative 2035 Plus Project	Incremental Increase vs Existing	Cumulatively Significant? (Yes or No) ²	Incremental Increase vs Cum. 2035	Cumulatively Considerable? (Yes or No) ²
	[A]		[B-A]								
East of Grand St West of Park St East of Park St	68	68	0		No	67	68	0	No	1	No
	68	69	1		No	69	69	1	No	0	No
	66	67	1		No	67	68	2	No	1	No
Clement Avenue West of Entrance Rd East of Entrance Rd West of Stanton St East of Stanton St West of Ohlone St East of Ohlone St West of Grand St East of Grand St West of Park St East of Park St	0	0	0		No	0	0	0	No	0	No
	NA	NA	NA		NA	71	71	NA	NA	0	No
	NA	NA	NA		NA	71	72	NA	NA	1	No
	NA	NA	NA		NA	70	70	NA	NA	0	No
	NA	NA	NA		NA	70	70	NA	NA	0	No
	NA	NA	NA		NA	70	70	NA	NA	0	No
	NA	NA	NA		NA	70	70	NA	NA	0	No
	NA	NA	NA		NA	70	70	NA	NA	0	No
	NA	NA	NA		NA	71	72	NA	NA	1	No
	67	67	0		No	71	71	4	No	0	No
	67	67	0		No	67	67	0	No	0	No
	Blanding Avenue West of Tilden Wy East of Tilden Wy	0	0	0		No	0	0	0	No	0
70		70	0		No	74	74	4	No	0	No
72		72	0		No	74	74	2	No	0	No
Sherman Street North of Buena Vista Ave South of Buena Vista Ave	0	0	0		No	0	0	0	No	0	No
	70	70	0		No	70	70	0	No	0	No
	66	66	0		No	66	66	0	No	0	No
Entrance Road North of Buena Vista Ave	0	0	0		No	0	0	0	No	0	No
	58	67	9		Yes	66	67	9	Yes	1	No
Stanton Street North of Buena Vista Ave South of Buena Vista Ave	0	0	0		No	0	0	0	No	0	No
	47	47	0		No	51	51	4	No	0	No
	51	51	0		No	53	53	2	No	0	No
Grand Street North of Buena Vista Ave South of Buena Vista Ave	0	0	0		No	0	0	0	No	0	No
	66	66	0		No	66	66	0	No	0	No
	66	66	0		No	67	68	2	No	1	No
Parks Street North of Blanding Ave South of Blanding Ave	0	0	0		No	0	0	0	No	0	No
	74	74	0		No	76	76	2	No	0	No
	73	73	0		No	75	76	3	No	1	No

TABLE 4.D-6 (Continued)
SUMMARY OF TRAFFIC NOISE MODELING RESULTS AT 50 FEET FROM ROADWAY CENTERLINE

	Peak-Hour Noise Level, dBA, Leq ¹											
	Existing		Existing Plus Project [B]	Incremental Increase		Significant? (Yes or No) ²	Cumulative 2035	Cumulative 2035 Plus Project	Incremental Increase vs Existing	Cumulatively Significant? (Yes or No) ²	Incremental Increase vs Cum. 2035	Cumulatively Considerable? (Yes or No) ²
	[A]			[B-A]								
	Street Segment											
		73	73	0	No	75	75	75	2	No	0	No
		72	72	0	No	74	74	74	2	No	0	No
		72	72	0	No	73	73	73	1	No	0	No
		71	72	1	No	73	73	73	2	No	0	No
Tilden Way		0	0	0	No	0	0	0	0	No	0	No
		68	68	0	No	70	70	70	2	No	0	No
		69	69	0	No	71	71	71	2	No	0	No
Jackson Street		0	0	0	No	0	0	0	0	No	0	No
		72	72	0	No	73	73	73	1	No	0	No

NA = Traffic volumes were not included in the *Encinal Terminals Project Transportation Impact Analysis* prepared by Abrams Associates (Abrams Associates, 2016)

¹ Noise levels were determined using California Vehicle Noise (Calveno) Reference Energy Mean Emission Levels (Remels). In areas where the noise environment is dominated by traffic, the Leq during the peak-hour is generally equivalent to the CNEL/LDN at that location (Caltrans, 2013).

² Traffic noise is considered significant if the incremental increase in noise is 4 dB or more if the resulting noise level would exceed that described as normally acceptable for the affected land use (60 dBA DNL or less for residential uses) or if the noise level increased by 6 dB in any noise environment.

SOURCE: ESA, 2016

GPA EIR Mitigation Measure NOISE-2a (revised): Acoustical studies, describing how the exterior and interior noise standards will be met, ~~should~~ shall be required for all new residential or noise sensitive developments exposed to environmental noise greater than CNEL 60 dBA, or one-family dwellings not constructed as part of a subdivision requiring a final map exposed to environmental noise greater than CNEL 65 dBA. The studies should also satisfy the requirements set forth in Title 24, part 2, of the California Administrative Code, Noise Insulation Standards, for multiple-family attached, hotels, motels, etc., regulated by Title 24.

GPA EIR Mitigation Measure NOISE-2b (revised): ~~All new projects~~ The applicant shall show that ~~they~~ the proposed project will comply with maximum noise levels outlined in the City's Noise Ordinance and the average sound level goals outlined in the City's General Plan.

GPA EIR Mitigation Measure NOISE-3 (revised): ~~New projects in the Northern Waterfront GPA should~~ The applicant shall submit ~~require~~ acoustical studies, describing how the exterior and interior noise level standards will be met for the proposed project as well as any impacts on adjacent projects. Studies shall also satisfy the acoustical requirements of the City's General Plan, Title 24, of the Uniform Building Code.

Significance after Mitigation: Less than Significant.

Cumulative Impact

The geographic context for changes in the noise and vibration environment due to development of the proposed project would be the adjacent urban areas of the City of Alameda. In order to contribute to a cumulative construction noise impact, another project in close proximity would have to be constructed at the same time as the proposed project. There are numerous foreseeable development projects at various locations near the proposed project site, currently in the planning stages, which could be constructed and operational in the foreseeable future. The largest projects in close vicinity of the proposed project are Alameda Landing Mixed-Use Development, Alameda Point Project, Alameda Station retail Development, Boat Works Residential Project, Del Monte Mixed Project, Marina Cove II, Alameda Marina, Alameda Housing Authority Eagle Avenue Residential Project, 2100 Clement Avenue Townhomes Project, 1435 Webster Street Mixed Use Development, and Veteran's Affairs Clinic and National Cemetery.

The proposed project's main contribution to a cumulative noise impact is future traffic volumes. Cumulative non-transportation (e.g., HVAC noise sources) noise impacts are typically project-specific and highly localized. Since cumulative non-transportation noise sources cannot be compared to existing conditions, they are not discussed here. However, as discussed under impact 4.D-3, stationary sources associated with the land uses under the proposed project would be minor and the project would be subject to the City's Noise Ordinance and the policies included in the City General Plan. Project-related construction activities within the Project area would contribute to cumulative noise levels on a temporary basis.

Impact 4.D-4: The proposed project would result in exposure of people to cumulative increases in construction noise levels. (Less than Significant with Mitigation)

The proposed project may be constructed during the same time and duration as other cumulative projects that could result in a contribution in construction noise levels. The closest cumulative projects to the project area are the Marina Cove II and Del Monte development projects located approximately 50 and 350 feet from the proposed project area. These projects could be under construction at the same time as the proposed project.

As previously discussed under Impact 4.D-1, construction of the proposed project would result in the noise exposure of residences located within 550 feet of the project site's southern-easternmost boundary (existing Marina Cove II residences) that would result in a temporary substantial increase in ambient noise levels. Therefore, there is a possibility that the proposed project, in conjunction with the Marina Cove II and Del Monte development projects, could result in a significant cumulative impact associated with construction noise. However, with implementation of GPA EIR Mitigation Measure NOISE-1a and Mitigation Measure NOISE-1b, noise levels generated during the construction would be reduced by requiring the applicant to adhere to the City's allowed construction hours and create and implement a development-specific noise reduction plan. After mitigation, the proposed project's contribution to this cumulative impact would not be cumulatively considerable. This is the same finding as that found in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Significance after Mitigation: Less than Significant.

Impact 4.D-5: The proposed project would contribute to cumulative construction that could expose buildings, and persons within, to significant vibration. (Less than Significant with Mitigation)

As previously discussed under Impact 4.D-2, the construction activities within the proposed project may require the use of impact pile drivers. Vibration levels generated during the construction of the proposed project by itself would not exceed the applied vibration threshold for human annoyance and building damage at nearby existing sensitive receptors. However, if project-related activities were to coincide with another development in close physical proximity, the combined effect could result in the exposure of sensitive land uses or buildings to higher vibration levels than what was predicted for the proposed projects. However, under modified GPA Mitigation Measures NOISE-1a and -1b, the applicant would be required to create and implement a development-specific noise and vibration reduction plan to reduce noise to below the City's noise threshold and also to use a vibratory pile driver whenever feasible. After mitigation, the proposed project's contribution to this cumulative impact would not be cumulatively considerable. This is the same finding as that found in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Significance after Mitigation: Less than Significant.

Impact 4.D-6: Increases in traffic from development facilitated by the proposed project in combination with other development could potentially result in cumulatively considerable noise increases. (Less than Significant)

Peak traffic noise levels were predicted at a representative distance of 50 feet from the center of the roadways for the existing, cumulative and cumulative plus project conditions. These predictions used the same modeling methodology described in impact discussion 4.D-3, above. Results of this analysis are summarized in Table 4.D-6. According to Caltrans' *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (Caltrans, 2013), peak traffic noise levels are approximately equal to the CNEL/Ldn.

Development facilitated by the proposed project would result in cumulatively considerable noise if estimated traffic noise level increases resulting from the cumulative with project to cumulative noise levels without the project. Per policy 8.7.h of the City of Alameda General Plan Health and Safety Element (1991), the significance criteria for changes in noise from project operational traffic are as follows:

1. A 4 dB increase in CNEL as a result of project operations if the resulting noise level would exceed that described as normally acceptable for the affected land use (60 dBA DNL or less for residential uses).
2. Any CNEL increase of 6 dB or more, due to the potential for adverse community response.

As shown in Table 4.D-6, cumulative (without project) traffic noise impacts would occur along Atlantic Avenue, between Webster Street and Challenger Drive, where traffic noise levels would increase between 3 to 5 dB over existing conditions. Sensitive receptors located along these roadway segments would be exposed to cumulative (without project) traffic noise that would exceed the established traffic noise increase thresholds. However, the proposed project would not be a major contributor to future cumulative traffic noise levels. As shown in Table 4.D-6, the proposed project would increase cumulative traffic noise levels by at most 1 dB, which would not exceed the established cumulatively considerable noise increase threshold. All other local roadway segments analyzed near the project site showed a traffic cumulative noise increase of less than 1 dB. Consequently, none of the roadway segments analyzed would result in a significant increase in traffic noise from the proposed project versus the cumulative scenario and would not have a cumulatively considerable contribution to the overall significant impact. This is the same finding as that found in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

References

- Caltrans, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.
- City of Alameda, 1991. *City of Alameda General Plan*. <http://alamedaca.gov/community-development/planning/general-plan>, accessed June 24, 2013.
- City of Alameda, 2016. *City Alameda Municipal Code*, August 8, 2016.
- Federal Transit Administration (FTA), 2006. *Transit Noise and Vibration Impact Assessment*, May 2006.
- Office of Planning and Research (OPR), 2003. *State of California General Plan Guidelines*, October 2003.

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E. Population and Housing

E.1 Introduction

To determine whether the proposed project would result in any new impacts related to population or housing, or increases in the severity of impacts previously disclosed in the Northern Waterfront General Plan Amendment (GPA) EIR, this analysis considers the impacts that would result from the proposed project, and compares these impacts to those identified in the previous EIR. This analysis also discusses the applicability of mitigation measures identified in the Northern Waterfront GPA EIR.

E.2 Environmental Setting

Population and Households

The City of Alameda is an urbanized island city with limited developable land remaining within its boundaries. According to the Department of Finance population estimates, Alameda's population was 79,277 on January 1, 2016. For the past two decades, the population in Alameda has been less than its peak in 1994 of 79,291 residents, due to the closing of Naval Air Station Alameda (NAS Alameda) and the Fleet Industrial Supply Center (FISC), now called Alameda Landing. However, between 2000 and 2010 the City of Alameda population increased from 72,259 persons to approximately 73,812 persons, an increase of 2.1 percent (Housing Element, 2014). By 2040, ABAG estimates the population of Alameda will reach 95,500 persons (ABAG and MTC, 2013).

The average household size for the City of Alameda in 2010 was 2.40 persons per household, and ABAG estimated that figure had grown to 2.48 in 2014 (ABAG, 2014). Between 1990 and 2000, the number of households in the City of Alameda increased from 29,235 to 30,226 households, or by approximately 3 percent. Between 2000 and 2010, the number of households decreased to 30,123 households (Bay Area Census, 2016). The number of households is projected by ABAG to increase to 36,570 households in 2040 as shown in **Table 4.E-1** (ABAG and MTC, 2013).

**TABLE 4.E-1
CITY OF ALAMEDA POPULATION, HOUSING, AND JOBS**

	2000 ^a	2010 ^a	2014 ^b	2040 ^c	Percent Change 2010-2040
Population	72,259	73,812	75,763	95,500	29.4
Households	30,226	30,123	30,346	36,570	21.4
Housing Units	31,644	32,351	32,166	38,240	18.2
Jobs	27,380	24,030	na ¹	33,220	38.2

NOTES:

¹ U.S. Census does not provide information on the number of jobs in 2014.

SOURCE: (a) Bay Area Census, 2016; (b) U.S. Census, 2016; City of Alameda, 2014; (c) ABAG and MTC, 2013.

Housing

According to the 2010 Census, there were 32,351 housing units in the City of Alameda. Of these, 53 percent were detached single-family units and the remaining 47 percent were multi-family units (Housing Element, 2014).

The project site is identified as a housing opportunity site in the City of Alameda General Plan Housing Element, which identifies housing opportunity sites in Alameda to meet the City of Alameda's Regional Housing Needs Allocation for the period 2015 through 2023.

Employment

Just as with population growth, employment history has been turbulent in Alameda over the past decades. Jobs decreased in the 1990's as the result of the NAS and FISC closures, with total jobs decreasing from 38,730 in 1990 to 27,380 in 2000. Jobs in Alameda declined again between 2000 and 2010 as result of the nationwide economic recession from 27,380 in 2000 to 24,030 in 2010 (Table 4.E-1). (City of Alameda, 2014). However, since the recession, the City's economy has exhibited a strong recovery with the addition of about 2,400 new jobs by 2015.

Regulatory Framework

This subsection briefly describes regional and local regulations and policies pertaining to population and housing as they apply to the proposed project.

State and Regional

Association of Bay Area Governments

State Housing Element Law, Government Code Section 65584, requires local governments to plan for their fair share of projected, future regional housing needs. Each jurisdiction must plan for its Regional Housing Needs Allocation (RHNA) when its General Plan Housing Element is updated. The allocation takes into consideration regional and local factors such as jobs, housing, land use and transportation.

The City of Alameda Housing Element was certified by HCD on July 15, 2014 for the period 2015 through 2023, with the 2013 RHNA allocations. The Encinal Terminals site is identified as a Housing Opportunity site in the Alameda Housing Element. The allocation of affordability levels for these units for the five-year planning period ending December 31, 2023, is provided in **Table 4.E-2**.

**TABLE 4.E-2
GROWTH IN THE NORTHERN WATERFRONT PDA BY 2023**

Income Limits	Extremely Low	Very Low	Low	Moderate	Above Moderate	Total
2015-2023	n/a	444	248	283	748	1,723

SOURCE: Housing Element, 2014.

Plan Bay Area and the Northern Waterfront PDA

The region's Sustainable Communities Strategy, Plan Bay Area 2013, was formally adopted by ABAG and MTC in July 2013. The methodology used for housing and employment projections contained in the *Plan Bay Area* is set forth in detail in Appendix B of the *Plan Bay Area Jobs-Housing Connection Strategy*, which states that the projected distribution of housing “takes into account local input and key sustainability, equity, and economic factors. These factors utilize new data sources that better identify sustainable locations for growth and planned levels of development. The housing distribution is linked to existing and future transit service and expected level of GHG emissions from each area of the region, with the goal of utilizing the existing transit infrastructure efficiently and directing growth to places that can provide the best opportunity for emissions reductions. However, growth in each place is tied directly to housing potential that has been defined by local jurisdictions.”

Appendix B of the *Plan Bay Area Jobs-Housing Connection Strategy* further states that projected distribution of future employment “takes into account employment growth by sector and is linked to transit infrastructure and local input. Employment growth is organized under three major groups: knowledge-sector jobs, population-serving jobs, and all other jobs. The knowledge-sector jobs are expected to grow based on current concentration, specialization, and past growth as well as transit service and access. Population-serving jobs, such as retail stores are expected to grow based on residential growth. All other jobs are expected to grow according to the existing distribution of jobs in each of these sectors.”

Plan Bay Area provides housing and employment projections for the San Francisco Bay Area, as well as counties, cities, and priority development areas (PDAs).¹ In contrast to previous trends where new development primarily occurred on raw rural lands, *Plan Bay Area* directs development to PDAs. According to ABAG, “this allows the region to reduce the emission of GHGs, house our population in a wide range of neighborhoods, preserve our natural resources, and support the creation of and greater access to new employment opportunities” (ABAG and MTC, 2013a).

The project site is within the Northern Waterfront PDA, which includes a grouping of underutilized industrial properties along the City's northern shoreline. *Plan Bay Area* describes the vision for this PDA as follows:

“...a series of mixed use, waterfront and transit oriented neighborhoods that will provide a mix of jobs and transit oriented housing types to serve the next generation of Alameda residents. The plans propose that a mix of uses are developed on former industrial and auto-oriented lands and preserve former railroad right of way for future bus rapid transit or light rail improvements. The Clement Avenue corridor through the Northern Waterfront is a designated transit priority right of way. The plans emphasize the importance of a mix of uses and a diversity of housing types for all income and household types.”

According to *Plan Bay Area*, the Bay Area is expected to “experience more modest growth than in past decades.” Even so, ABAG still projects “healthy economic growth of 1.1 million jobs and

¹ PDAs are areas where future growth within the Bay Area is intended to be concentrated. Within PDAs, “new development will support the day-to-day needs of residents and workers in a pedestrian-friendly environment served by transit” (ABAG and MTC, 2013).

2 million people by 2040 as the Bay Area continues to attract cutting-edge, high technology companies, talent, and investment from around the world.” This regional projection “assumes a full-employment economy with unemployment rates returning to normal levels within a successful national economy. The forecast also recognizes the challenges with building new housing in the region that is largely multi-family and in infill locations, and the impact that has on our ability to capture potential job growth. Achieving this growth will require that the region respond to an aging and diversifying population, polarizing wages, high housing and transportation costs, and other issues affecting our quality of life” (ABAG and MTC, 2013a). Plan Bay Area 2040, a strategic update to Plan Bay Area 2013, is currently underway and planned for adoption in June of 2017.

Local

City of Alameda General Plan Housing Element

The City’s General Plan Housing Element was adopted on July 15, 2014. The Housing Element accommodates the City’s RHNA allocation and identifies parcels in the City that are available or underutilized that could be used for development of housing and to meet the City’s RHNA. The site is identified as one of the necessary housing sites to meet the RHNA.

The City of Alameda General Plan Land Use Element contains the following policies related to population, employment and housing:

Residential Areas

- Policy 2.4.c** Where a suitable residential environment can be created, give priority to housing on land to be developed or redeveloped in order to meet the quantified objectives of the Housing Element.
- Policy 2.4.e** Expand housing opportunities for households in all income groups.
- Policy 2.4.i** Encourage the inclusion of family child care homes in residential areas and child care centers in major residential and commercial developments with special consideration to areas or developments convenient to transit, community centers, and schools.
- Policy 5.5.e** Minimize commuting by balancing jobs and nearby housing opportunities.

Retail Business and Services

- Policy 2.5.a** Provide enough retail business and services space to enable Alameda to realize its full retail sales potential and provide Alameda residents with the full range of retail business and services.
- Policy 2.5.g** Maintain neighborhood business districts for small stores that attract mainly pedestrian traffic and can be acceptable neighbors for nearby residents.
- Policy 2.5.j** Maximize opportunities for retail development at Alameda Point to support creation of a mixed use, transit oriented community at Alameda Point as envisioned in the Alameda Point General Plan policies.
- Policy 2.5.k** Pursue and encourage new retail development that is consistent with the retail policies of the General Plan and Economic Development Strategic Plan;

primarily serves the community or addresses a high priority local retail or service need; and will not have a significant long term deleterious effects on existing retail areas and/or the local economy.

- Policy 2.5.x** Develop a pedestrian oriented town center at Alameda Point with community retail shops and services in close proximity to transit, ferry, and other transportation facilities.

Northern Waterfront General Plan Element

- Policy 10.3.d** Provide for a mixture, both vertical and horizontal, of compatible residential, neighborhood-serving commercial, commercial, retail, office, marine, and open space uses.
- Policy 10.4.a** Provide for a mix of housing types, densities, and affordability levels throughout the Plan area.
- Policy 10.4.b** Encourage and support the development of both “for-rent” and “for-sale” affordable housing units distributed throughout the Plan area.
- Policy 10.4.e** Rezone the Encinal Terminals, Grand Marina, and Pennzoil sites for mixed-use residential development.
- Policy 10.4.f** Encourage the development of residential units on the upper floors of small commercial buildings in the Mixed-Use designated areas, in compliance with the City Charter.

E.3 Impacts and Mitigation Measures

Significance Criteria

Appendix G of the CEQA *Guidelines* provides that a project would have a significant population or housing impact if it would:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Approach to Analysis

The methodology for this analysis included reviewing relevant documents, statistics, and policies about the City’s housing population and employment data. Additionally, local regulations were reviewed for project applicability, including the General Plan, ABAG, U.S. Census Bureau, and California Department of Finance. The proposed project was evaluated based on the potential effects on Alameda’s housing, population and employment.

Northern Waterfront GPA EIR

The GPA EIR concluded that the GPA would result in less-than-significant effects related to population and housing. In particular, the GPA EIR concluded that projected population growth would be well within the growth rate established by the Association of Bay Area Governments for the City of Alameda, would not displace persons or displace or destroy housing located within the Northern Waterfront GPA area, would not contribute to the future projected jobs/housing imbalance, and would provide affordable residential development needed in the City. The analysis below presents updated analysis for the proposed project, which would develop more units than were assumed by the Northern Waterfront GPA EIR, and a comparison of these impacts to the previous findings.

Impact Analysis

Impact 4.E-1: The proposed project would not induce substantial population or housing growth directly or indirectly. (Less than Significant)

The proposed project would result in a direct increase in population through the development of up to 589 new housing units. According to ABAG, the average per-household population within the City of Alameda is 2.48 (ABAG, 2014). Using this number, the project would cause an increase in residential population of up to 1,461 people. The population growth resulting from the proposed project is generally consistent with the population growth projections in the City of Alameda General Plan Housing Element, which are based on those estimates provided by the ABAG RHNA. The projections are also consistent with the Alameda County Transportation Commission's population growth projections for the City of Alameda. The growth in population that would occur with implementation of the proposed project was planned for in the General Plan, and the impacts of this growth were previously evaluated in the GPA EIR. The GPA EIR assumed that based on an average projected household size in 2025 of 2.40 persons per single-family household, the projected 389 single-family households that were anticipated as part of the Northern Waterfront GPA would increase the City of Alameda's population by approximately 933 persons (page IV.B-5 of GPA EIR).

The estimate for the population increase associated with the project is greater than what was assumed in the GPA EIR due to the higher average person-per-household factor of 2.48 being applied to the project, and the increase in 200 housing units over what was assumed in the GPA EIR. As described in the GPA EIR, infill development in the existing urban area has been demonstrated by regional planning and transportation professionals to be an environmentally sound means of accommodating regional economic development. The project would allow for efficient utilization of land and infrastructure, as opposed to the development of open space and agricultural land at the periphery of existing urban areas.

The project would result in the creation of around 196 jobs onsite with the development of between 30,000 and 50,000 square feet of commercial and office space (EPS, 2016). The project would also create temporary employment opportunities that would be directly and indirectly related to construction (around 831 total), and would create around 72 new ancillary jobs in Alameda County that would provide the project's residents with goods and services (EPS, 2016).

As discussed previously, the jobs/housing balance in the City is weighted towards employed residents. The project would result in greater housing-related population growth than job-related population growth; as such, the project would contribute to a further jobs/housing imbalance. However, the project would result in the construction of new housing in the Bay Area where regionally housing growth is outpaced by job and population growth, resulting in a housing shortage. As such, the project would not adversely impact the future projected jobs/housing imbalance at a regional level (ABAG, 2015).

The proposed project includes affordable housing, which is an identified need in Alameda and the region. The proposed project site is located within a half-mile of an AC Transit bus stop (at the intersection of Santa Clara Avenue and Stanton Street), which is consistent with population, housing, transportation, and greenhouse gas reduction (global warming) policies established by the State of California (most recently by SB 375 and AB 32), the Metropolitan Transportation Commission, and ABAG. Furthermore, new AC Transit Bus Line 19 will run along Buena Vista Avenue within one block of the project site. This service will commence operation in December of 2016 and will provide the Northern Waterfront area with a direct connection to the Downtown Oakland and Fruitvale BART stations.

The project would constitute infill development within a developed urban area, and new roads and infrastructure would not be extended into an undeveloped area. For the above-described reasons, the project would not cause a new impact related to a substantial increase in population growth that was not already evaluated in the GPA EIR. This is the same finding as the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Comparison to Northern Waterfront GPA EIR Findings: No new or more severe impact.

**Impact 4.E-2: The proposed project would not displace any people or housing units.
(No Impact)**

The project site was formerly used as an unloading point for fishing boats, and most recently a shipping container dock. There are currently two vacant warehouse buildings near the center of the site, and three small buildings at the southern end of the site, all of which are vacant at this time. The site currently contains no active uses and there are no residential units on the project site. Development on this site would not displace any existing residents, and, therefore, would not necessitate the construction of replacement housing elsewhere. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Comparison to Northern Waterfront GPA EIR Findings: No new or more severe impact.

Cumulative Impacts

Impact 4.E-3: Development facilitated by the proposed project, in conjunction with potential past, present, and future development in the surrounding region, would not result in unanticipated population, housing, or employment growth, or the displacement of existing residents or housing units on a regional level. (Less than Significant)

Development of the proposed project, present projects, and reasonably foreseeable future projects, when added to past development in the City, would result in population, housing, and employment growth. “Substantial” growth is defined as unplanned growth, for which infrastructure, services, and housing have not been planned. So long as the cumulative project scenario generates cumulative population, housing, and employment conditions that are within the projections of the City and ABAG, there would be no significant adverse growth impact related to population, housing, or employment.

The geographic context for the analysis of cumulative impacts related to population and housing is the City of Alameda. The geographic context for analysis of cumulative impacts to employment would include the City of Alameda, as well surrounding cities and counties in the Bay Area,² since a portion of the City’s population commutes to jobs outside the City limits and some of the jobs in the City are likely filled by residents living in surrounding areas.

The past and present development in the City is described in the Environmental Setting section of this chapter, which represents the baseline conditions for evaluation of cumulative impacts. Reasonably foreseeable future development forecasts are based on projections of future growth provided by the City and developed to be consistent with ABAG. These forecasts account for other major projects currently in various stages of the approval process.

The increase in housing and population associated with the proposed project would not have a significant cumulative impact on population, housing or employment growth. The City of Alameda routinely prepares growth projections to inform the planning and environmental review process; these projections are based on regional estimates provided by ABAG that reflect growth in the Bay Area as a whole. These projections inform the policies of the General Plan to ensure infrastructure and government services are expanded accordingly. The General Plan currently assumes that residential and commercial uses will be developed at the project site and within the surrounding Northern Waterfront GPA area. This growth is anticipated at a regional level by ABAG, which envisions the population within the Northern Waterfront PDA reaching 4,465 by 2040, an increase of 2,042 people. As such, the 1,461 new residents that would be associated with the project fall within ABAG’s growth estimates for the Northern Waterfront PDA, the City of Alameda, and for the region as a whole. Furthermore, the type of development that is proposed at the project site is consistent with ABAG’s vision for the Northern Waterfront GPA to provide “a

² The Bay Area region includes the following counties: Alameda County, Contra Costa County, Marin County, Napa County, San Francisco County, San Mateo County, Santa Clara County, Solano County, and Sonoma County.

series of mixed use, waterfront and transit oriented neighborhoods that will provide a mix of jobs and transit oriented housing types to serve the next generation of Alameda residents.”

As discussed under Impact 4.E-1, the project would contribute to a jobs/housing balance in the City that is weighted towards employed residents. The City of Alameda is planning for significant job growth as a result of the redevelopment of Alameda Point, which would provide more jobs than housing (7,900 new jobs to 5,470 new housing units). As such, the project would provide housing to support these new jobs and the project’s effect on the jobs to housing balance within the City would not be substantial. In addition, the project would increase the supply of housing units in the Bay Area as a region and thus, would not have a negative effect on the region’s jobs/housing imbalance.

The direct and indirect impacts of population, housing, and job growth on the project site are considered throughout this SFEIR and include potential impacts from increased traffic, air pollutant emissions, greenhouse gas emissions, noise, visual effects, and the provision of public services and utilities. To the extent that the projected population would result in significant adverse effects to these resources, these impacts have been identified and considered within relevant sections of this document.

Because the population from the proposed project, plus related projects, is within ABAG’s projections, the new population has been anticipated by the various utilities and public service providers and other agencies that rely on ABAG’s population projections for anticipating future impacts on various resources. The proposed project, in accordance with the City’s General Plan and in combination with the development of cumulative projects in the area, would accommodate planned growth, rather than induce unplanned growth. As a result, cumulative impacts related to population and housing are less than significant. This is the same finding as the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Comparison to Northern Waterfront GPA EIR Findings: No new or more severe impact.

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F. Public Services

F.1 Introduction

This section describes public services and facilities, including police, fire and emergency services, parks and recreation facilities, as well as public schools and libraries, and analyzes the project's projected demand on each of these services.

F.2 Environmental Setting

Fire and Emergency Services

The Alameda Fire Department (AFD) provides fire protection and emergency medical services to the project site. The AFD currently has four operating fire stations located throughout the City and 98 sworn and seven non-sworn personnel. The AFD is also equipped to provide emergency medical services with three full-time advanced life support (ALS) ambulances. A response for a first alarm assignment consists of three fire engines, two fire trucks, one ambulance and the Division Chief vehicle. The response team for a first alarm call includes, at minimum, eighteen fire personnel accompanied by at least one paramedic. The AFD also provides non-emergency ambulance transport for patients to or from medical facilities through the Basic Life Support (BLS) Transport Program, including inter-facility transportation, doctors' appointments, dialysis appointments, and medical event standbys.

The project is within two miles of all four stations operated by AFD. The project site is 0.4 mile from Station Number 3, at 1709 Grand Street, which would likely be the first to provide fire and emergency response services at the site. Station No. 3 has one fire captain, one fire apparatus operator, one fire engine, one fire boat, and one water rescue boat. In 2015, Station No. 3 responded to 2,102 calls, 1,516 of which were emergency response calls, 83 of which were fire-related calls, and 503 of which were other calls (City of Alameda, 2016b). A new Station No. 3 is under construction at the corner of Buena Vista Avenue and Grand Street and will replace the existing station, and includes a new emergency operations center for the City. Upon completion, the project site would be served by this new Station No. 3.

According to the GPA EIR, the AFD's goal is to respond to calls within 3.5 minutes 90 percent of the time (City of Alameda, 2006). The AFD does not have an official staffing ratio, but generally there are 24 firefighters and one fire chief on duty every day.

Police Services

Police protection to the project site would be provided by the Alameda Police Department (APD). The Department operates out of one station located at 1555 Oak Street, which is approximately 1.3 miles from the project site. The APD currently has a total of 88 sworn officers and 33 non-sworn personnel (City of Alameda, 2016d).

The APD's patrol is based on a five-sector system. Seven days a week, 24 hours a day, officers are assigned to patrol the five sectors during which there are typically one to four officers assigned to each sector. According to the GPA EIR, the GPA planning area is located in Police Sector 2. The APD has 30 patrol vehicles, but only eight are typically used during each shift. APD aims to respond to 85 percent of all calls for service within three minutes and generally responds to around 5,000 priority calls and 60,000 non-priority calls per year (City of Alameda, 2016e).

Schools

The project site is located within the service boundaries of the Alameda Unified School District (AUSD). AUSD operates a childhood development center, ten elementary schools, two middle schools, two comprehensive high schools, an Early College High School, and an adult continuation school. AUSD's total enrollment was 11,101 students for the 2015-2016 school year (DataQuest, 2016). The District uses a boundary map to assign students to schools by home address. Students residing in the project area are served by Henry Haight Elementary, Wood Middle School, and Encinal High School (AUSD, 2016). Henry Haight School is located at 2025 Santa Clara Avenue, approximately 0.7 mile southeast of the site. Wood Middle School is located at 420 Grand Street, about 1.1 miles south of the site and Encinal High School is located at 210 Central Avenue, approximately 2 miles from the project site.

Table 4.F-1 shows enrollment trends for the three nearest schools over the past five years. As shown, enrollment at each of these schools has fluctuated over the years. Enrollment at Henry Height Elementary is up 55 students from enrollment in the 2011-2012 school year, but down 14 students from the 2014-2015 school year. Wood Middle School has steadily decreased over the five year period, down 127 students from the 2011-2012 school year. Enrollment at Encinal High School has also decreased since the 2011-2012 school year, with 37 fewer students enrolled in the 2014-2015 school year. As of the 2015-2016 school year, enrollment at all three facilities was well below their maximum student capacity.

**TABLE 4.F-1
SCHOOL ENROLLMENT AND CAPACITY**

School	Students 2011-2012	Students 2012-2013	Students 2013-2014	Students 2014-2015	Students 2015-2016	Capacity
Henry Haight Elementary	383	414	438	452	438	591
Wood Middle School	595	537	429	439	468	928
Encinal High School	1,089	1,055	1,038	1,052	nd ¹	1,200

NOTES:

¹ No data.

SOURCE: Ed-Data, 2016; CDE, 2016; City of Alameda, 2006.

Parks and Recreation

City Facilities

The Alameda General Plan provides the following definitions for the four types of parks and community open space that can be found within the City:

- **Developed Park Land.** The City has over 200 acres of neighborhood parks, community parks, community open space, greenways, and regional parks.
- **Planned Park Lands.** Undeveloped park lands include the 20-acre Mt. Trashmore site, planned 22-acre Jean Sweeny Open Space Park, planned greenways and trails, and the future Catellus Mixed-Use Development and Alameda Point open space.
- **Limited Access Lands.** Limited-access park lands either require a fee for use or are closed to the general public, and include the Chuck Corica Municipal Golf Course, College of Alameda recreation and open space facilities, AUSD facilities, and two public swimming pools. The City has a joint agreement with AUSD for the use of the pools, which are used by students, City Swim Clubs, and the Master's Program during the school year. The Recreation and Park Department provides public aquatic programs during the summer at the pools.
- **School Parks.** This includes all AUSD school properties, which are generally not available for public use after school and on weekends due to locked gates.

The City has approximately 155 acres of parkland and approximately 75,763¹ residents, or about 2.1 acres per 1,000 residents, including school playgrounds and fields. The City of Alameda's General Plan does not state a specific goal of park acreage per 1,000 residents; however, most California cities strive for three to six acres of park per 1,000 residents. About 95 percent of Alameda residents live within $\frac{3}{8}$ -mile of a park, the maximum radius for effective service as indicated by studies in other cities (City of Alameda, 1991).

There are three existing parks, and one planned park, that are in proximity to the project site and would be within reasonable walking distance from the site:

- **Littlejohn Park** is a 3.45-acre park located at 1401 Pacific Avenue, immediately south of the project site. Littlejohn Park features an unlighted multi-use field for baseball, softball, soccer, and football. The park has several picnic areas, two half basketball courts, a 2-12 year-old age group playground, a community building, and open lawn for informal play. There is enhanced planting at the entry near the community building. Parking is on-street only, and the park is surrounded on three sides by residences. There is ADA access to the group picnic area.
- **Marina Cove Waterfront Park** is a 3.2-acre park located at 1591 Clement Avenue that runs along the marina from Clement Avenue to the Alameda Yacht Club. The park features open lawn areas at each end connected by a walk overlooking the water, picnic areas, benches, and a play area, all of which provide opportunities to rest and enjoy the views. Park lighting enhances safety.

¹ City of Alameda population in 2014, according to U.S. Census, 2016, American Community Survey 5-Year Estimates. Accessible online at: <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.

- Jean Sweeney Open Space Park*** is a planned 22-acre park located a few hundred feet to the west of the project site, across Sherman Street. The park will feature passive and active recreation, with a bike path along a proposed extension of the CAT running east to west through the site, a community garden, play areas, lawns, and other features. Construction on the park is set to commence in late 2016/early 2017.

**TABLE 4.F-2
EXISTING PARK AND OPEN SPACE AREAS WITHIN THE CITY**

Type/ Name of Park	Acres	Type/ Name of Park	Acre
<i>Neighborhood Parks</i>		<i>Open Space</i>	
Bayport Park	4.25	Encinal Boat Ramp	1.40
Franklin	2.98	Grand Street Boat Ramp	1.40
Godfrey	5.45	Main Street Dog Park	1.30
Harrington (Soccer Field)	2.02	Main Street Linear Park	11.00
Jackson	2.27	Osborne Model Airplane Field	1.30
Littlejohn	3.45	Portola Triangle	2.30
Longfellow	1.14	Scout	0.01
Marina Cove Waterfront Park	3.20	Shoreline	31.83
McKinley	1.22	<i>Subtotal</i>	<i>50.82</i>
Neptune	3.08		
Rittler	4.80	<i>Recreational Facilities/Other</i>	
Tillman	4.01	Alameda Point Gym	0.20
Towata	1.55	Albert DeWitt Officers' Club	3.40
Woodstock	3.96	College of Alameda Hardball Field	4.60
Alameda Point Multi-Purpose Field	4.80	Mastick Senior Center	2.66
City View Skate Park	0.55	<i>Subtotal</i>	<i>10.86</i>
Main Street Soccer Field	4.92		
<i>Subtotal</i>	<i>53.65</i>	<i>Regional Park</i>	
		Crown Memorial Beach	80.00
<i>Community Parks</i>		<i>Subtotal</i>	<i>80.00</i>
Leydecker	5.88		
Lincoln	7.80		
Krusl	7.46		
Washington	14.71		
<i>Subtotal</i>	<i>35.85</i>	Total for all Parks and Facilities	228.60

SOURCE: City of Alameda, 2016f.

Regional Facilities

The East Bay Regional Park District (Park District) spans Alameda and Contra Costa counties and operates 65 parks of approximately 113,000 acres and over 1,200 miles of trails. These parklands provide habitat for birds and other wildlife, in addition to recreational and educational activities for the public. Crown Memorial State Beach, a State park operated by the Park District, is the closest Park District facility to the project site. The park has a 2.5 mile beach, with sand dunes bordering a bicycle trail. The Elsie Roemer Bird Sanctuary at the east end of the park, harbors aquatic birds and other salt marsh creatures. Crab Cove is located at the north end of the park, and is a marine reserve where all plant and animal life is protected. In addition, a marine

educational center (Crab Cove Visitor Center), is located on McKay Avenue within Crown Memorial State Beach, and contains exhibits and aquaria highlighting flora and fauna of San Francisco Bay and other local marine areas.

Crown Memorial State Beach includes a portion of the San Francisco Bay Trail, which is southwest of the project site, adjacent to the water. The Bay Trail is a planned recreational corridor administered by the Association of Bay Area Governments (ABAG) pursuant to Senate Bill 100 that will encircle San Francisco and San Pablo Bays with a continuous 500-mile network of bicycling and hiking trails when completed. Approximately 310 miles of the Bay Trail's ultimate length have been completed (Bay Trail, 2013). Completed segments of the Bay Trail that are located in Alameda and in proximity to the project site include: Atlantic Avenue from Webster Street to Buena Vista Avenue, the walking path through Shoreline Park connecting to Atlantic Avenue via Triumph Drive, and Grand Street beginning at Buena Vista Avenue and heading south. Future planned expansions of the Bay Trail within Alameda and adjacent to the site include: Buena Vista Avenue from Atlantic Avenue to the northern shoreline via Tilden Way, and Grand Street from Buena Vista Avenue north to the Alameda Marina. In addition, much of the shoreline on the northern side of the Oakland Estuary is a completed or planned segment of the Bay Trail.

In addition, the City of Oakland owns and operates two parks located on the northern side of the Oakland Estuary, near the project site. To the northwest of the project site is Estuary Park, a seven acre facility that is adjacent to the Jack London Aquatic Center and connected to existing segments of the Bay Trail. Estuary Park provides a boat launch ramp, fish cleaning station, a pier, an athletic field, and other amenities. Union Point Park is a nine-acre facility located to the west of the project site that provides waterfront access, picnic and barbeque facilities, a children's play area, and other amenities.

Libraries

The Alameda Free Library has three locations. The West End Library, located at 788 Santa Clara Avenue, is the closest library to the project site. The Library offers a wide range of services to support community priorities, including answering reference questions, staging story times, providing summer reading programs, hosting class visits, and offering free public programs (City of Alameda, 2016).

F.3 Regulatory Setting

This subsection briefly describes policies pertaining to public services as they apply to the proposed project.

State

Senate Bill 50

The California Legislature passed Senate Bill 50 (SB 50) in 1998 adding Government Code Sections 65995.5-65885.7, which authorized school districts to impose fees on developers of new

residential construction. SB 50 also restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate.

Under SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. Payment of school development fees is considered, for the purposes of CEQA, to mitigate in full any impacts to school facilities associated with a development project.

San Francisco Bay Conservation and Development Commission's San Francisco Bay Plan

The San Francisco Bay Plan was completed and adopted by the San Francisco Bay Conservation and Development Commission in 1968 and submitted to the California Legislature and Governor in January 1969. The Bay Plan was prepared by the Commission pursuant to the McAteer-Petris Act of 1965 which established the Commission as a temporary agency to prepare an enforceable plan to guide the future protection and use of San Francisco Bay and its shoreline. In 1969, the Legislature acted upon the Commission's recommendations in the Bay Plan and revised the McAteer-Petris Act by designating the Commission as the agency responsible for maintaining and carrying out the provisions of the Act and the Bay Plan for the protection of the Bay and its great natural resources and the development of the Bay and shoreline to their highest potential. Applicable policies from the Bay Plan are provided below.

Recreation

Policy 1 Diverse and accessible water-oriented recreational facilities, such as marinas, launch ramps, beaches, and fishing piers, should be provided to meet the needs of a growing and diversifying population, and should be well distributed around the Bay and improved to accommodate a broad range of water-oriented recreational activities for people of all races, cultures, ages and income levels[...] Because there is no practical estimate of the acreage needed on the shoreline of the Bay, waterfront parks should be provided wherever possible.

Public Access

Policy 2 In addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline, whether it be for housing, industry, port, airport, public facility, wildlife area, or other use, except in cases where public access would be clearly inconsistent with the project because of public safety considerations or significant use conflicts, including unavoidable, significant adverse effects on Bay natural resources. In these cases, in lieu access at another location preferably near the project should be provided.

Policy 5 Public access should be sited, designed, managed and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding.

Policy 9 Access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available. Diverse and interesting public access experiences should be provided which would encourage

users to remain in the designated access areas to avoid or minimize potential adverse effects on wildlife and their habitat.

- Policy 10** Roads near the edge of the water should be designed as scenic parkways for slow-moving, principally recreational traffic. The road-way and right-of-way design should maintain and enhance visual access for the traveler, discourage through traffic, and provide for safe, separated, and improved physical access to and along the shore. Public transit use and connections to the shoreline should be encouraged where appropriate.
- Policy 12** The Public Access Design Guidelines should be used as a guide to siting and designing public access consistent with a proposed project. The Design Review Board should advise the Commission regarding the adequacy of the public access proposed.

Local

City of Alameda General Plan

Public services are addressed in several sections of the City of Alameda General Plan. Fire and police services are addressed in the Health and Safety Element and schools and parks are addressed in the Parks and Recreation, Shoreline Access, Schools and Cultural Facilities Element and the Open Space and Conservation Element. In addition, general policies related to public services are provided in the Land Use Element. Applicable policies from each of these elements are listed below.

Land Use Element: Residential Areas

- Policy 2.4.q** Require that all new development pay appropriate development impact fees.

Parks and Recreation, Shoreline Access, Schools and Cultural Facilities Element: Shoreline Access and Development

- Policy 6.2.a** Maximize visual and physical access to the shoreline and to open water.
- Policy 6.2.d** Through design review of shoreline property, give consideration to views from the water.
- Policy 6.2.f** Cooperate with property owners adjoining shoreline access points to ensure that public use does not cause unnecessary loss of privacy or unwarranted nuisance.
- Policy 6.2.h** Require shoreline access where appropriate as a condition of development approval regardless of whether development occurs within the area of BCDC regulation.

Parks and Recreation, Shoreline Access, Schools and Cultural Facilities Element: Schools

- Policy 6.3.b** Support the Alameda Unified School District efforts to obtain school impact fees needed to maintain adequate educational facilities to serve enrollment generated by new development in the City.
- Policy 6.3.c** Approval of residential, commercial and industrial development may be conditioned upon the mitigation of the impact of such development on the Alameda Unified School District.

Health and Safety Element Fire Hazards

- Policy 8.2.a** Maintain and expand the City's fire prevention and fire-fighting capability.
- Policy 8.2.b** Maintain the current level of emergency medical service.
- Policy 8.2.d** Assure the compliance of new structures with the City's current Fire, Seismic, and Sprinkler Codes. Existing structures shall be required to comply with the intent of the Codes in a cost-effective manner.

Northern Waterfront General Plan Element

- Policy 10.3.b** Require a mix of uses and open space near the Estuary and shoreline that provides for a lively waterfront and a pedestrian friendly environment.
- Policy 10.3.d** Provide for a mixture, both vertical and horizontal, of compatible residential, neighborhood-serving commercial, commercial, retail, office, marine, and open space uses.
- Policy 10.3.f** Allow for the development of public facilities; such as schools and/or fire stations within the Northern Waterfront plan area. Consider opportunities to relocate Fire Station #3 to a location within the Northern Waterfront area adjacent to the Estuary.
- Policy 10.6.l** Create pedestrian and bicycle pathways and visual corridors along the waterfront and linking the waterfront to inland neighborhoods.
- Policy 10.6.z** Ensure that police, fire, educational, parks, opens space, and other public services are adequately funded to serve new development.
- Policy E-T 2** Require that the master plan include adequate open space and a clear public access around the perimeter of the site.
- Policy E-T 3** The Master Plan should consider relocating the tidelands trust lands to the perimeter of the site to allow residential mixed-use development in the core of the site with publicly accessible open space around the perimeter of the site.
- Policy E-T 16** The site plan should allow for a shoreline public promenade around the perimeter of the site and adjacent to the Alaska Basin and Fortman Marinas.

F.4 Impacts and Mitigation Measures

Significance Criteria

Implementation of the proposed project could have a significant impact on the environment if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
 - Fire Protection;
 - Police Protection;

- Schools;
 - Parks.
2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
 3. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Approach to Analysis

Project-generated increases in population and land use intensity were evaluated based on information from public services providers regarding their service capabilities, service ratios, response times, and performance objectives. Additionally, this SFEIR evaluates the project's conformance and consistency with the goals, objectives and policies of the General Plan related to public services and recreation.

Analysis Under the Northern Waterfront GPA EIR

The Northern Waterfront GPA concluded that the GPA would result in less-than-significant impacts related to fire and emergency services and demand for school services. More specifically, the GPA EIR concluded that although future buildout of the Northern Waterfront GPA would result in an increase in calls for police services, such growth would not require alterations to existing facilities. Similarly, the GPA EIR concluded that anticipated fire response times would be in conformance with response times to the rest of the City of Alameda and that future development would be subject to the City's Development Impact Fee, which would be the source of funding for improvements needed by the Fire Department. With respect to demands for school services, the Northern Waterfront GPA would generate new students for the schools serving the Northern Waterfront GPA area. Payment of the adopted School Facilities Mitigation Fees would ensure that the project would not result in a significant impact. The GPA EIR concluded that the Northern Waterfront GPA would result in beneficial and less-than-significant impacts related to parks, recreation, and open space because the Northern Waterfront GPA would increase opportunities to improve portions of the Bay Trail and would provide additional shoreline access and park areas.

Impact Analysis

Fire Protection and Emergency Medical Services Impacts

Impact 4.F-1: The proposed project would result in an increase in calls for fire protection and emergency medical response services, but would not require new or physically altered fire protection facilities in order to maintain acceptable performance objectives. (Less than Significant)

The proposed project would demolish existing structures on the project site and allow for development of up to 589 new housing units, a marina with up to 160 boat slips and a harbormaster's office, between 30,000 and 50,000 square feet of commercial/office and restaurant

uses, and over three acres of waterfront-related public open space and parks. This is estimated to result in 1,461 new residents. This development and additional persons within the project site would generate an increase in demand for fire protection and emergency services.

Project construction would comply with standard fire code requirements administered by the City of Alameda Community Development Department's Permit Center and specified by the California Building Code and California Fire Code. Consistent with City requirements, the project would place fire hydrants a maximum of 250 feet apart, and meet minimum flow requirements of 1,500 gallons per minute (gpm) with 20 pounds per square inch (PSI) residual pressure. The project would also be subject to fire flow requirements set forth in the California Fire Building Code, which specify a typical 3,000 gpm from two hydrants and 1,500 gpm from each hydrant with 20 PSI residual pressure. Additionally, all new buildings would be required to be equipped with complete sprinkler systems. These standard required design features would ensure that adequate infrastructure would be provided for firefighting services. The City of Alameda Municipal Code Chapter 27-26, Police and Fire Fee Requirements, states that new development must pay fees to assist in maintaining level of service standards to accommodate new growth.

The project would result in an increase in calls for fire services but until more project specific information has been developed, the extent of the impact on existing fire facilities is unknown (Raff, 2014). As noted in the GPA EIR, the increase in calls for fire services could result in a need for additional equipment and traffic light control devices but the acquisition of such equipment and installation of new light devices would not result in any significant environmental impacts since this type of activity would be relatively minor and would occur in an already developed area. As further described in the GPA EIR, development on the project site would result in increased tax revenues to pay for fire services, and the project would be required to pay the City's Development Impact Fee, which would be the source of funding for any improvements needed by the Fire Department and would substantially mitigate the project's impacts on fire service to a less than significant level. For the above-described reasons and because the project would not require development of new public fire facilities, the project would have a less-than-significant impact on fire protection services. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Police Services Impacts

Impact 4.F-2: The proposed project would result in an increase in calls for police services, but would not require new or physically altered police facilities in order to maintain acceptable performance objectives. (Less than Significant)

Implementation of the proposed project would increase land use intensity and overall density in and around the project site. This related population increase could result in an increase in reported

crimes and/or calls for police services. However, it is not anticipated that the proposed project would result in an increase in calls to such an extent that new police facilities or alterations to existing facilities would be needed. As part of the City's development review and approval procedures, the Police Department would review the proposed site plan and would provide recommendations related to security features and opportunities to reduce crime. The City's Municipal Code Chapter 27-26, Police and Fire Requirements, would require the project to pay development impact fees to maintain service levels and accommodate growth. The project would also result in an increase in tax revenues to fund the provision of police services. Consistent with the findings described in the GPA EIR, the project would result in an increase in calls for police services for a variety of property- and traffic-related incidents but the increase would not be sufficient to require construction of new police stations in order to maintain adequate response times. As such, the project would have a less-than-significant impact on police services. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Public Schools Impacts

Impact 4.F-3: The proposed project would result in new students for local schools, but would not require new or physically altered school facilities to maintain acceptable performance objectives. (Less than Significant)

Students generated from development of the proposed project would attend Henry Haight Elementary School, Wood Middle School, and Encinal High School. The AUSD uses a student yield factor as a basis for the determination of students generated by a specific project. The GPA EIR relied on student yield factors provided by AUSD's demographic consultant in 1999. For multi-family units, the GPA EIR relied on the following student yield factors: 0.43 kindergarten through fifth grade students, 0.18 middle school students, and 0.18 high school units, per unit.

Table 4.F-3 shows the more recent yield factors that were utilized to determine the student generation of mixed use residential construction, which are lower than those used in the GPA EIR:

**TABLE 4.F-3
ANTICIPATED STUDENTS PER HOUSEHOLD**

Grade Level	Multi-Family Units	Students
K-5	0.068	40
6-8	0.035	21
9-12	0.053	31
Total	0.156	92

SOURCE: Recht, 2014.

Based on these factors, the proposed project's 589 units of condominiums, townhomes, lofts and live-work units would generate a maximum of 92 new students, including 40 K-5 students, 21 grade 6-8 students, and 31 grade 9-12 students. **Table 4.F-1**, summarizes enrollment and capacity for schools that would serve the proposed project. All three schools have sufficient capacity to accept the estimated number of students generated by the proposed project. As such, it is unlikely that the addition of new students associated with the proposed project would cause school enrollment to exceed existing capacity, or result in a need for physical expansion of school facilities.

Payment of the School Facilities Mitigation Fee has been deemed by the State legislature to be full and complete mitigation for the impacts of a development project on the provision of adequate school facilities. The assessment of the adopted School Facilities Mitigation Fee ensures that the project would not result in a significant impact under CEQA, in accordance with Senate Bill 50, which became effective in 1998. With payment of the school impact fees, the proposed project would have a less-than-significant impact upon public school services within the AUD. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Other Public Facilities

Impact 4.F-4: The proposed project would result in increased use of other governmental facilities, including libraries, but would not require new or physically altered government facilities to maintain acceptable performance objectives. (Less than Significant)

The Alameda Free Library offers library services to the residents of Alameda. The West End library branch, located 1.0 mile away from the project site at 788 Santa Clara Avenue, is the closest library. The Library offers a wide range of services, including answering reference questions, staging story times, providing summer reading programs, hosting class visits, and educational events.

The GPA EIR does not contain any specific thresholds for library services or facilities. While the proposed project would generate an incremental increase in demand for library services, the additional demand that would be generated by an estimated population of 1,461 persons, only a small portion of whom would be expected to utilize the library in any given month, would be expected to be a small fraction of the existing monthly visitors. This would not require an expansion of library facilities, and the project's impact on library services would be considered less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Parks and Recreation Impacts

Impact 4.F-5: The proposed project would increase the use of existing neighborhood and regional parks and recreation centers, but not to the extent that substantial physical deterioration of the facilities would occur or be accelerated, nor would it cause the necessity for new or expanded facilities. (Less than Significant)

The proposed residential uses are located within easy walking distance of existing park and recreation areas that include both neighborhood and regional facilities. Although only a portion of new residents are expected to use neighborhood and regional parks in the area, the proposed project would cause an incremental increase in the use of these facilities.

The proposed project provides for development of approximately 589 new housing units that are anticipated to result in a population of approximately 1,461 residents in the project site by 2035. These additional residents would generally utilize the three acres of new park and recreation facilities that are proposed as part of the project, as well as the parks that are located in the vicinity of the project. The proposed parks and open space areas include a waterfront promenade along the perimeter of the project site and creation of a central open space over one acre in size.

Although the proposed project would result in an incremental increase in demand for existing parks, the amount of additional use by new residents would not be expected to result in physical deterioration of the parks, or otherwise adversely affect park facilities. The project would pay the City's Development Fees (described in Municipal Code Chapter 27-2), which would mitigate the impacts of new development on existing city parks by providing funds for the construction or expansion of new parks. Because the project includes open space and recreational uses and would pay Citywide Development Fees, the project would have a less-than-significant impact on park facilities. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Impact 4.F-6: The proposed project includes recreational facilities and the construction or expansion of recreational facilities which might have an adverse physical effect on the environment (Less than Significant).

As discussed under Impact 4.F-5, the proposed project would result in the construction of a new promenade along the perimeter of the project site and open space areas throughout the project site. In addition, and as described in the GPA EIR, Clement Avenue would be extended from Entrance Road to Sherman Street and would provide pedestrian and bicycle connectivity between the park and open space uses on the project site and the Bay Trail and the planned 22-acre Jean Sweeny Park to the west of the site.

Construction activities of the proposed parks and recreational facilities have been evaluated as part of the overall project. The construction of the proposed Waterfront Park and open space

facilities would be phased over time as subarea development projects are implemented under the proposed project. Construction-related impacts in any single location would be temporary. The construction impacts of the proposed project related to new park and recreational facility construction, and, as needed, mitigation measures and other construction related regulatory requirements, are discussed in: Section 4.A, *Air Quality*; Section 4.B, *Biological Resources*, Section 4.D, *Noise*; and Section 4.G, *Traffic and Circulation*. Other effects are discussed in the Initial Study, contained in **Appendix A**.

While construction of the proposed park and recreation facilities could result in potentially significant environmental impacts, implementation of mitigation measures described throughout this EIR would reduce construction-related impacts to a less-than-significant level. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Cumulative Impacts

Impact 4.F-7: The project, in conjunction with other past, current, or foreseeable development in Alameda, could result in impacts related to public services and recreation. (Less than Significant)

The geographic setting for cumulative impacts to public services is the City of Alameda, or the service area of each respective public service agency. Past and present projects are described in the *Environmental Setting* section of this chapter, which represents the baseline conditions for the evaluation of cumulative impacts. Reasonably foreseeable future development forecasts are based on projections of future growth and take into account projects going through the entitlement process. Those forecasts account for other major projects currently in various stages of the approval and construction process. The proposed project, in combination with other past, present, and future projects in the City of Alameda would result in an increase in demand for public services for an estimated 95,500 residents that would be living in Alameda by 2040 (ABAG and MTC, 2013).

Fire Protection

The proposed project, and cumulative projects, would result in an increase in demand for fire protection and emergency response services over time. As individual development projects pursue City approvals, the City and the AFD consider the ability of existing AFD facilities to accommodate each project. To the extent that future development results in a need for new staff members, equipment, or improvement to or expansions of their facilities, the City and AFD leverage the City's Development Impact Fees and property tax revenues for expanding their services. Like the proposed project, all development projects that are proposed in the City are reviewed by AFD to ensure fire detection and suppression systems, emergency access, and fire

hydrants are provided, as required by the California Building Code, Fire Code, and the City's Municipal Code. If new AFD facilities are needed to accommodate cumulative projects, the facility would require discretionary approval and undergo project-specific environmental review pursuant to CEQA to determine the potential for physical, construction-related environmental effects and identify all feasible mitigation measures. The proposed project, in conjunction with other cumulative development, would not have a significant cumulative impact associated with fire protection services, and the project's cumulative impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Police Protection

The proposed project, and cumulative projects, would result in an increase in demand for police services over time. As individual development projects pursue City approvals, the City and APD consider the ability of existing facilities to accommodate each project. The City and project site are currently served by APD, which operates out of one station located at 1555 Oak Street. As discussed above, the project would be adequately served by the existing station and no new station would need to be constructed. Adequate emergency access would be required for the proposed Project, and all cumulative projects, pursuant to the existing City plan check process and existing city programs, practices, and procedures, would continue to ensure the adequate provision of police protection services. All future development projects would undergo environmental analysis to determine their potential impact on police services, on a project-by-project basis, and the City would leverage development impact fees and/or property tax revenues to expand their services, as needed. The proposed project, in conjunction with other cumulative development, would not have a significant cumulative impact associated with police services, and the Project's cumulative impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Schools

The proposed project, and cumulative projects, would result in an increase in demand for public school services over time. As individual development projects pursue City approvals, the City and AUSD consider the ability of existing facilities to accommodate each project. As discussed under Impact 4.F-3 above, the Project Applicant would pay the City's development impact fees, which would fully mitigate the impacts of the project under SB 50 by providing funds to expand school facilities and services, as needed. Cumulative development projects in the City would also pay these fees, which would fully mitigate the effects of cumulative development pursuant to SB 50 and thus, no significant cumulative impact to schools would result. It is not known if and when the construction of additional school facilities, beyond those currently planned, might be required or where they would be located. If new AUSD facilities were needed to accommodate cumulative projects, the facility would require discretionary approval and undergo project-specific environmental review pursuant to CEQA to determine the potential for physical, construction-related environmental effects and identify all feasible mitigation measures. The

proposed project, in conjunction with other cumulative development, would not have a significant cumulative impact associated with public school services, and the project's cumulative impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Parks and Recreation

Development of the proposed project in conjunction with other past, present, and reasonably foreseeable future projects would result in an increased intensity of land use and a corresponding increase in usage of park and recreational facilities. The City periodically conducts studies to support long term planning efforts as part of the General Plan process to ensure adequate parkland acreage is provided to serve new residents. This effort, and future efforts, will continue to inform the future expansion of the City's park system to ensure adequate services are provided. There is an extensive network of local and regional parks, trails, and open space areas provided in the Bay Area, totaling at least 1.4 million acres, with projections for expansion to 2.0 million acres by 2025 (Open Space Council, 2014). Future projects requiring discretionary approval would undergo environmental analysis pursuant to CEQA to ensure adequate park and recreation facilities are provided, and new facilities would undergo project specific environmental review to determine the potential for physical, construction-related effects and identify mitigation measures to reduce those effects. Like the proposed project, past projects have, and present and future projects in the City would, contribute to public park improvements through the construction of park and recreational facilities included as part of the project, payment of fees, or the dedication of land or conservation easements, as permitted by the Quimby Act and required by the City's development impact fees. As such, the approval process would ensure that the substantial physical degradation of existing neighborhood and regional parks and other recreational facilities would not occur or be accelerated as a result of an increase in use from new residents. The proposed project, in conjunction with other cumulative development, would not have a significant cumulative impact associated with park and recreational facilities, and the project's cumulative impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Library

The proposed project in combination with past, present, and future development in the City of Alameda would increase the demand for library service. As discussed above, the project would be adequately served by the existing library and no new facilities would need to be constructed. All future development projects would undergo environmental analysis to determine their potential impact on library services, on a project-by-project basis, and the City would leverage development impact fees and/or property tax revenues to expand their services, as needed. If new library facilities were needed, they would undergo further project-specific environmental analysis to determine the potential for physical, construction-related effects and identify mitigation measures to reduce those effects. The proposed project, in conjunction with other cumulative development, would not have a significant cumulative impact associated with police services, and the project's cumulative impact would be less than significant. This is the same finding as the

proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Conclusion

The proposed project, in conjunction with other cumulative development, would not have a significant cumulative impact associated with public services, and the project's cumulative impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

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G. Transportation and Circulation

G.1 Introduction

This section describes the current transportation network and regulatory setting and summarizes the effects on the existing and future circulation system that would result from the development of the Encinal Terminals project.

G.2 Environmental Setting

Regional Setting

Regional vehicular access to the site is provided primarily by the interstate freeway system that serves the Bay Area region. Interstate 880 (I-880) connects the study area with the remainder of the interstate freeway network.

I-880 is a north-south eight-lane freeway (though oriented east-west in the study area) that runs from Oakland to San Jose through East Bay cities such as San Leandro, Hayward, Union City, Newark, Fremont and Milpitas. Besides providing access to the Bay Bridge, I-880 also provides linkage to the San Francisco Peninsula to the west via the San Mateo Bridge (SR 92) and the Dumbarton Bridge (SR 84). Access to and from the project site is available on I-880 via the Webster and Posey Tubes, which connect to freeway ramps on Fifth Street and Sixth Street in Oakland. Travel via each of these ramps except the southbound I-880 off-ramp also requires motorists to travel through the southern or southeastern portion of Oakland's Chinatown, along Sixth and Seventh Streets. Additional access to and from I-880 is available from points further east in Alameda via the Park Street Bridge, Fruitvale Avenue Bridge, and High Street Bridge. According to Caltrans and the Metropolitan Transportation Commission (MTC), I-880 is one of the Bay Area's most congested freeways, with extended peak traffic periods (heaviest in the northbound direction in the morning, and in the southbound direction in the afternoon/evening). Increasing congestion on I-880 results in increased vehicular delay for Alameda residents attempting to access the region in the morning commute hours or return to Alameda in the evening hours.

I-980 connects I-880 and I-580 in the study area and becomes SR 24 north of I-580.

SR 24 connects Oakland with Contra Costa County via the Caldecott Tunnel. I-980 can be reached from Alameda through the Webster and Posey Tubes via the I-980/I-880 junction or on local Oakland streets.

SR 61 bisects the City of Alameda, running along Encinal Avenue, Park Street, and Otis Drive before crossing the Bay Farm Island Bridge to continue renamed as Doolittle Drive past the Oakland International Airport and into San Leandro.

With the growth of the Bay Area by over one million residents and almost one million jobs in the last 20 years, Alameda and Bay Area residents have been experiencing increasing congestion on the regional freeway system and the local street network that connects to the regional freeways, such as Webster Street and Park Street in Alameda.

The MTC and the Association of Bay Area Governments (ABAG) concluded (in the Plan Bay Area report) that the Bay Area consistently ranks as one of the most congested metropolitan areas in the nation, and that it is no longer possible for the Bay Area to build its way out of congestion by adding additional roadway capacity. Instead, MTC and ABAG conclude that the region must find ways to operate the existing highway and transit networks more efficiently, and target expansion projects that will provide long-term and sustainable congestion relief. Among the strategies put forth in Plan Bay Area is to increase the non-auto travel mode share and to reduce vehicle miles traveled (VMT) per capita and per employee, through transit-oriented development, improvements to transit, and active transportation modes such as walking and bicycling to improve mobility within the region and reduce regional and statewide greenhouse gas (GHG) emissions.

Local Setting

The Encinal Terminals site is located along the northern shoreline of the City of Alameda on the north side of the right-of-way for the planned Clement Avenue extension. The project would be accessed from Buena Vista Avenue via a planned extension of Entrance Road onto the site, and from the planned extension of Clement Avenue from its current terminus at Grand Street to a future terminus at Atlantic Avenue and the future Jean Sweeney Open Space Park (described in G.4, *Impacts and Mitigation Measures*).

The **Webster and Posey Tubes** serve as one of the most direct connections from I-880 to and from the project site via SR 260, and provide access between Alameda and Oakland. The Webster Tube serves southbound traffic into Alameda, while the Posey Tube operates in the northbound direction from Alameda. Webster Street experiences substantial delays during the morning commute hours due to morning congestion on I-880.

Clement Avenue is currently a two-lane street that runs east/west from Broadway to Grand Street along the northern waterfront with its mix of maritime, residential, institutional, and manufacturing land uses. Parking is permitted on both sides of the street. Clement Avenue is currently being extended in phases from Grand Street to the current intersection of Sherman Street and Atlantic Avenue at the eastern end of the planned Jean Sweeney Open Space Park. The Marina Cove and Marina Shores residential developments have completed the extension from the Shell Oil facility (adjacent to the current terminus at Grand Street) to Entrance Road at the entrance of Encinal Terminals. Construction of the extension from Entrance Road to Jean Sweeney Park is planned for construction beginning in 2017 as part of the construction for the Del Monte warehouse adaptive reuse project. Once the Del Monte section is complete, the only remaining section to complete will be approximately a 100-foot-long section through the Shell Oil facility. Once complete, the Clement Avenue extension will be an important part of the Cross Alameda Trail bicycle cycle track from Alameda Point to the East End of Alameda. The Clement Avenue extension will also provide an alternative cross alameda route for trucks and automobiles currently using Buena Vista Avenue.

Pursuant to existing agreements and General Plan policies, the Encinal Terminals project would be required to contribute financially for a fair share of the Clement Extension with the other properties adjacent to the extension.

Buena Vista Avenue runs parallel to Clement Avenue one block south from the proposed project entrance. In December 2016, AC Transit re-instituted the AC Transit Route 19 on Buena Vista Avenue connecting Alameda's northern waterfront with the Fruitvale and Downtown Oakland BART stations. Pursuant to existing agreements and General Plan policies, the development of Encinal Terminals is required to contribute funds with other northern waterfront projects to fund supplemental service and Easy Passes for project occupants pursuant to General Plan policies and project agreements.

Lincoln Avenue runs parallel to Buena Vista Avenue two blocks to the south and contains four travel lanes and on-street parking allowed on both sides.

Park Street is a north/south arterial with four travel lanes. One end is located at the Park Street Bridge (providing access to Oakland and I-880), while the other is located at Shoreline Drive. Park Street experiences substantial delays during the morning commute hours due to morning congestion on I-880.

Sherman Street runs north/south and connects the project area to major east/west arterials such as Buena Vista Avenue, Central Avenue, and Encinal Avenue. Sherman Street has two travel lanes, and provides local access to the adjacent neighborhoods. Parking is prohibited on the segment closest to the project site.

Atlantic Avenue is a major east/west arterial connecting to the project area. The roadway has four travel lanes west of Webster Street, and two travel lanes (with parking prohibited) from Constitution Way to Sherman Street.

Marina Village Parkway functions as a major collector street that connects the commercial and residential developments in the Marina Village area with Constitution Way. The roadway generally has four travel lanes, with a raised median and left-turn storage lanes. Parking is prohibited along Marina Village Parkway.

Automobile Travel Conditions

To provide information to the Alameda community and Alameda decision makers about the relative impact of the project on the transportation system, this EIR provides a level of service (LOS) analysis in addition to an evaluation of VMT. For the LOS analysis, traffic operations are measured in terms of a grading system (shown in **Table 4.G-1** for signalized and unsignalized intersections), which is based on "control delay" experienced at the intersections. That delay is a function of the signal timing, intersection lane configuration, hourly traffic volumes, pedestrian volumes, and parking and bus conflicts among other factors. It is important to note, however, that there are instances when downstream constraints, such as congestion on freeways like I-880, can cause delays getting through intersections leading to the freeway on-ramps. In other words, it is not always signal operations that cause delays at intersections. These situations occur on a regular basis in Alameda. For example, a motorist may wait for an extended time in a long line of cars to travel through an intersection on Webster Street or Park Street during the morning commute. The delay passing through the intersection is not a function of the intersection itself and cannot be

**TABLE 4.G-1
DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE**

Unsignalized Intersections		Level of Service Grade	Signalized Intersections	
Description	Average Total Vehicle Delay (Seconds)		Average Control Vehicle Delay (Seconds)	Description
No delay for stop-controlled approaches.	≤10.0	A	≤10.0	Free Flow or Insignificant Delays: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
Operations with minor delay.	>10.0 and ≤15.0	B	>10.0 and ≤20.0	Stable Operation or Minimal Delays: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
Operations with moderate delays.	>15.0 and ≤25.0	C	>20.0 and ≤35.0	Stable Operation or Acceptable Delays: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
Operations with increasingly unacceptable delays.	>25.0 and ≤35.0	D	>35.0 and ≤55.0	Approaching Unstable or Tolerable Delays: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
Operations with high delays, and long queues.	>35.0 and ≤50.0	E	>55.0 and ≤80.0	Unstable Operation or Significant Delays: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	>50.0	F	>80.0	Forced Flow or Excessive Delays: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

SOURCE: Transportation Research Board, Special Report 209, *Highway Capacity Manual*, 2000.

lessened by changing the design of the intersection; the delay is caused by the downstream congestion caused by automobiles accessing an already congested I-880.

To provide a baseline for identification of impacts on the local roadway network, existing peak-hour traffic conditions were determined at 20 intersections in the project area, shown in **Figure 4.G-1**; three additional study intersections that do not currently exist are included in future analysis scenarios (as described below). The study intersections were selected because they represent locations along major traffic routes to and from the project site, as well as locations that could affect operations of other traffic modes or may be affected by traffic diverting and seeking alternative routes to the Webster and Posey Tubes.

As shown in **Table 4.G-2**, the intersections that experience significant delay (LOS E or worse) are those intersections that provide access to or from the I-880 freeway for commuters: Intersections #17, 19, and 23 at Park/Blanding, Broadway/5th [Oakland], and Jackson/6th [Oakland]. LOS calculation reports are provided in **Appendix F**.

Although drivers may experience regular delays at other study intersections (#12, 13, 14 and 15 in proximity to the Posey Tube, and #16 and 22 near the Park Street Bridge) those delays (long queues/backups) are not the result of the volume of traffic passing through the intersection, but simply the time that it takes to move down the street due to downstream congestion. Therefore the LOS calculation indicates an acceptable level of service.

Pedestrian, Bicycle, and Transit Travel Conditions

Pedestrian Travel

Alameda is a very walkable city with flat topography, a mild climate, compact development patterns, varied architecture, moderate block sizes, sidewalks, and street trees. Sidewalks are provided along both sides of most residential streets. In former industrial areas such as the North Waterfront area, sidewalks were not provided, but as portions of these areas are developed, new sidewalks have been constructed.

Currently, there is no sidewalk along the west side of Entrance Road leading to the site entrance, but the missing sidewalk will be constructed as part of the Del Monte adaptive reuse project. The Clement Avenue extension project will provide sidewalks from the Jean Sweeney Park to the site entrance at Entrance Road and Clement Avenue. Sidewalks exist along both sides of Buena Vista Avenue and the existing segment of Clement Avenue, and there are crosswalks across Buena Vista Avenue at Entrance Road and Arbor Street.

Pedestrian access from the west end of the island to Oakland's downtown and transit stations is poor and is provided by a narrow shared raised walkway within the east side of the Posey Tube. Pedestrians can also take an AC Transit bus across the estuary via the tube. Better pedestrian access across the estuary in eastern Alameda is provided by the bridge sidewalks.



SOURCE: Abrams Associates

Encinal Terminals . 130007

Figure 4.G-1
Study Intersections

**TABLE 4.G-2
EXISTING INTERSECTION LEVEL OF SERVICE**

Study Intersection Name		Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay ^a	LOS	Delay ^a	LOS
1	Clement Avenue & Stanton Street	<i>Future Intersection</i>	N/A	N/A	N/A	N/A
2	Clement Avenue & Ohlone Street	Side Street Stop	8.3	A	8.3	A
3	Clement Avenue & Grand Street	Side Street Stop	11.4	B	13.1	B
4	Clement Avenue and Entrance Road	<i>Future Intersection</i>	N/A	N/A	N/A	N/A
5	Clement Avenue & Sherman Street	<i>Future Intersection</i>	N/A	N/A	N/A	N/A
6	Buena Vista Avenue & Sherman Street	Traffic Signal	13.2	B	16.6	B
7	Buena Vista Avenue & Entrance Road	Side Street Stop	13.7	B	26.8	D
8	Buena Vista Avenue & Stanton Street	Side Street Stop	17.0	C	20.2	C
9	Buena Vista Avenue & Grand Street	Traffic Signal	8.8	A	9.9	A
10	Atlantic Avenue & Challenger Drive	Traffic Signal	8.7	A	14.3	B
11	Challenger Drive & Marina Village Drive	Traffic Signal	18.1	B	17.5	B
12	Atlantic Avenue & Constitution Way	Traffic Signal	15.3	B	15.9	B
13	Constitution Way & Marina Village Drive	Traffic Signal	13.3	B	13.2	B
14	Atlantic Avenue & Webster Street	Traffic Signal	23.1	C	25.9	C
15	Willie Stargell Avenue & Webster Street	Traffic Signal	7.5	A	7.8	A
16	Park Street & Clement Avenue	Traffic Signal	33.5	C	34.6	C
17	Park Street & Blanding Avenue	Traffic Signal	56.7	E	25.4	C
18	Blanding Avenue & Tilden Way	Traffic Signal	15.0	B	19.0	B
19	Broadway & 5th Street (Oakland)	Traffic Signal	24.2	C	65.2	E
20	Harrison Street & 7th Street (Oakland)	Traffic Signal	41.4	D	21.1	C
21	Buena Vista Avenue & Webster Street	Traffic Signal	9.8	A	7.3	A
22	Buena Vista Avenue & Park Street	Traffic Signal	12.1	B	10.1	B
23	Jackson Street & 6th Street (Oakland)	Traffic Signal	18.8	B	68.4	E

NOTES:

^a The LOS/Delay for Side-Street Stop-Control (SSSC) intersections represents the worst movement or approach; for Signalized intersections, the LOS/Delay represents the overall intersection.

Bold indicates locations with unacceptable level of service.

SOURCE: Abrams Associates, 2016.

Bicycle Travel

Because of the flat terrain of Alameda and temperate climate, the bicycle travel mode is particularly feasible for able-bodied travelers. The Park Street Bridge and Miller-Sweeney (Fruitvale Avenue) Bridge provide connections for cyclists traveling to/from Oakland and/or to/from the Fruitvale BART station.

Bicycle access from the west end of the island to Oakland's downtown and transit stations is provided by a substandard, narrow shared raised walkway on the east side of the Posey Tube. Bicyclists can also take an AC Transit bus across the estuary via the tube. Access across the estuary in eastern Alameda is allowed on the bridge sidewalks.

Bicycle facilities are defined as the following three classes according to Chapter 1000 of the Caltrans *Highway Design Manual*:

- **Class I** – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
- **Class II** – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.
- **Class III** – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.

Upon completion of the Clement Avenue extension behind the Del Monte Building, the site will be connected to the future Jean Sweeney Park and Cross Alameda Trail by a protected cycle track. Class II bike lanes on Grand Street to the east, Atlantic Avenue to the west, and Santa Clara Avenue to the south provide access to points east and south. The City's General Plan also designates Pacific Avenue, which parallels Buena Vista Avenue one block to the south, as a bicycle priority route.

The City of Alameda Bike Master Plan includes plans for additional bikeways in the project vicinity, including a Class I path along the estuary, filling in gaps in the current trail, as well as a Class I path along Ralph Appezato Memorial Parkway, and Class II bike lanes along Willie Stargell Avenue, and Fifth Street north of Willie Stargell Avenue to the estuary.

Transit Services

Public transit services in the project vicinity are provided by the Alameda-Contra Costa Transit District (AC Transit), the Bay Area Rapid Transit District (BART), the Water Emergency Transit Agency (WETA) and Amtrak.

AC Transit provides fixed route bus service that travels to 13 cities and unincorporated areas in Alameda and Contra Costa counties from Richmond/Pinole in the north, to Fremont in the south, to Castro Valley in the east, and west into and from San Francisco. Four AC Transit bus routes run within general walking distance of the proposed project. In December 2016, AC Transit re-instituted the Route 19 on Buena Vista Avenue one block from the project entrance, which

provides direct service to Fruitvale BART and Downtown Oakland BART every 20 minutes during commute hours and every 30 minutes at other times. Line 51A has headways (frequency of service) of about 10 minutes and travels between the Berkeley Amtrak station and the Berkeley BART station and the Alameda Bridgeside Center. The line runs along Santa Clara Avenue and Broadway. The nearest bus stops to the project site are at the intersection of Santa Clara Avenue and Stanton Street (about 0.25 mile from project site). Line 851 is the all-nighter bus running a similar route to Route 51A and operates with one-hour headways. Line O is a transbay route operating on 30-minute headways that travels between downtown Alameda and downtown San Francisco, running along Santa Clara Avenue in the project site vicinity.

BART provides rail service to San Francisco as well as Contra Costa, Alameda, and San Mateo counties. BART operates in 15- to 20-minute intervals between 4:00 a.m. and midnight Monday through Friday; 6:00 a.m. to midnight on Saturdays; and 8:00 a.m. to midnight on Sundays and major holidays. The stations closest to the project site are in Oakland; the 12th Street / City Center station and the Fruitvale station are served by AC Transit Route 51A and Route 19.

WETA provides ferry services from Alameda to San Francisco from the Main Street Terminal on the north shore of Alameda and from the Harbor Bay Ferry Terminal on the southeastern end of Alameda. Due to heavy demand, WETA has increased frequency of services from Alameda in recent years and is working with the City of Alameda to add a third terminal at the Seaplane Lagoon at Alameda Point. In 2016, the City of Alameda in partnership with Oakland and Alameda private partners applied for a regional transportation grant to re-establish water shuttle services within the Estuary to provide additional connections between waterfront locations, such as Encinal Terminals and the Main Street and Jack London Square Ferry Services.

Amtrak provides service from the Oakland Jack London Square Amtrak station, located just across the Oakland Estuary, is the connecting point for two Amtrak routes. The Capitol Corridor, which serves Sacramento and Auburn to the east and Fremont and San Jose to the south, operates 15 eastbound and 15 westbound trains on weekdays and 11 trains per direction on weekends. The Amtrak San Joaquin, which serves the Central Valley corridor of Stockton, Fresno and Bakersfield, operates six trains per direction through the Jack London Square station on a daily basis.

G.3 Regulatory Framework

Vehicle Miles Traveled (VMT) and the State of California

In 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg 2013), which added Public Resources Code Section 21099 to the California Environmental Quality Act (CEQA), creating a process to change the way that transportation impacts are analyzed to better align local environmental review with statewide objectives to reduce greenhouse gas emissions, encourage infill mixed-use development in designated priority development areas, reduce regional sprawl development, and reduce vehicle miles traveled in California.

Senate Bill 743 mandates a change in the way that public agencies evaluate transportation impacts of projects under CEQA. SB 743 requires the State Office of Planning and Research to develop criteria to determine the significance of transportation impacts, and recommends a focus on vehicle miles traveled (VMT) as an appropriate measure for assessing the transportation impact of a project on the environment. VMT refers to the amount and distance of automobile travel attributable to a project.

Vehicle travel leads to a number of direct and indirect impacts to the environment and human health. Among other effects, increasing VMT on the roadway network leads to increased emissions of air pollutants, including greenhouse gases, as well as increased consumption of energy. Transportation is associated with more greenhouse gas emissions than any other sector in California. As documented in the City of Alameda Climate Action Plan, more than 54 percent of Alameda's greenhouse gas emissions are produced by local transportation. Reducing vehicle miles traveled by Alameda residents is the single most effective means to reduce Alameda's greenhouse emissions.

Increased tailpipe emissions are a direct effect of increased VMT. As VMT increases, so do emissions of carbon dioxide (CO₂), methane (CH₄), and nitrogen dioxide (N₂O) emissions. The U.S. Environmental Protection Agency (USEPA) estimates that model 2005 passenger vehicles in the U.S. emit an average of 0.0079 grams of N₂O and 0.0147 grams of NH₄ per mile. Other air pollutants also directly result from increased VMT. Per mile traveled, California's light vehicles emit 2.784 grams of CO, 0.272 grams of NO_x, and 0.237 grams of ROC (reactive organic gases, similar to volatile organic compounds). While technological improvements are reducing vehicle emissions, those improvements are being eroded by a dramatic increase in vehicle miles traveled.

In addition to generating air pollution, vehicle travel consumes substantial amounts of energy. More than 40 percent of California's energy consumption occurs in the transportation sector. Passenger vehicles account for 74 percent of emissions from the transportation sector.

SB 743 states that VMT is a more appropriate measure than automobile delay, which is not an impact on the environment. Pub. Resources Code § 21099(b)(2). Automobile delay is a measure of travel speed. Increased travel speed increases safety hazards and encourages automobile use, which increases greenhouse gas emissions and air quality impacts. SB 743 specifically targets automobile level of service (LOS) as an inappropriate measure of environmental impact, and encourages the use of VMT as an appropriate replacement measure.

SB 743 supports and complements the following:

- Assembly Bill 32 (AB 32), which requires statewide greenhouse gas reductions to 1990 levels by 2020, and continued reductions beyond 2020.
- Senate Bill 375 and California Air Resources Board established greenhouse gas reduction targets for metropolitan planning organizations to achieve in Regional Transportation Plans and Sustainable Community Strategies. Targets for the largest metropolitan planning organizations range from 13 percent to 16 percent reduction by 2035.
- Senate Bill 391 requires the California Transportation Plan to support an 80 percent reduction in GHGs below 1990 levels by 2050.

- Executive Order B-30-15, which sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030. Executive Order S-3-05, which sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050. Executive Order B-16-12, which specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.

On January 20, 2016, the Governor's Office of Planning and Research (OPR) released revised draft CEQA Guidelines consistent with SB 743, which recommend using VMT as the most appropriate metric of transportation impact to align local environmental review under CEQA with California's long-term greenhouse gas emissions reduction goals.

Regional

The Alameda County Transportation Commission (ACTC), through its Congestion Management Program (CMP), oversees how roads of regional significance function, and requires local jurisdictions to evaluate the impact of proposed land use changes (i.e., General Plan amendments, and developments with trip-generating potential of more than 100 new peak-hour vehicle trips) on the regional transportation systems.

Local

The City of Alameda General Plan is consistent with State of California transportation planning objectives, standards, and requirements and the Regional Sustainable Communities Strategy (Plan Bay Area). General Plan policies support in-fill, mixed use development, and improvements to access and mobility for all Alameda residents through a variety of modes of transportation, including automobiles, bicycles, transit, and walking. The Transportation Element ensures that decisions regarding the roadway network consider the benefits and impacts to all four modes of transportation as well as the potential quality of life and safety impacts on Alameda neighborhoods that might occur as the result of increasing automobile speeds, noise, and emissions in those local neighborhoods. The following General Plan Transportation Element policies demonstrate consistency between State objectives and Alameda General Plan objectives:

- | | |
|-----------------------|---|
| Policy 4.2.4.a | Encourage development patterns and land uses that promote the use of alternate modes and reduce the rate of growth in region-wide vehicle miles traveled. |
| Policy 4.2.4.b | Integrate planning for Environmentally Friendly Modes, including transit, bicycling and walking, into the City's development review process. |
| Policy 4.2.4.c | Encourage mixed use development that utilizes non-single occupancy vehicle transportation modes. |
| Policy 4.3.1.b | Consider the use of strategies to give priority to high occupancy vehicles at the bridges and tubes. |
| Policy 4.3.1.c | Actively encourage increases in public transit, including frequency and geographic coverage. |
| Policy 4.3.1.h | Encourage the creation of transit-oriented development and mixed-use development. |

Policy 4.4.2. e. Mitigations for future development should be solely directed at reducing traffic through TDM measures and transit, bicycle and pedestrian capital projects, as well as more efficient use of existing infrastructure via traffic signal re-timing, etc. in order to reduce the negative environmental effects of development, rather than attempting to accommodate them.

Climate Action Plan: In 2008, the City of Alameda adopted a Local Action Plan for Climate Protection, which establishes a citywide goal of reducing greenhouse gas emission by 25 percent below 2005 levels by 2020. As documented in the Climate Action Plan, more than 54 percent of Alameda's greenhouse emissions are produced by local transportation. Reducing vehicle miles traveled by Alameda residents is the single most effective means to reduce Alameda's greenhouse emissions.

G.4 Impacts and Mitigation Measures

Significance Criteria

According to Appendix G of the CEQA *Guidelines*, a project would have a significant impact on the environment if it 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 and 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.
- 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 congestion management agency for designated roads or highways.
- 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.
- Substantially increase hazards due to a design feature. (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Thresholds of Significance

For the purpose of this EIR, the project would have a significant transportation impact if it has one or more of the following effects:

- **Vehicle Miles Travelled (VMT).** Fails to reduce regional VMT because the project exceeds both the existing city household VMT per capita minus 15 percent and the existing regional household VMT per capita minus 15 percent.
- **Automobile Level of Service (LOS).** Cause an intersection Level of Service to degrade to LOS E or F, or would increase traffic volumes by 3 percent or more at an intersection that is currently operating at LOS E or F.

- **Transit Service.** Degrade transit speeds by 10 percent or more along a street segment. A segment is defined as the affected bus stop location, plus the two previous stops and the two subsequent stops.
- **Bicycle Safety.** Cause a bicycle segment LOS to degrade to worse than LOS B. If a street segment were already worse than LOS B, an impact would be considered significant if the bicycle segment LOS score increases by 10 percent or more in value.
- **Pedestrian Safety.** Cause the pedestrian LOS to degrade to worse than LOS B at a signalized intersection. If the intersection were already worse than LOS B, an impact would be considered significant if the delay at a crosswalk increases by 10 percent.

Approach to Analysis

Vehicle Miles Traveled

Per the State of California Office of Planning and Research's (OPR) Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA (January 2016), Section 15064.3 explains that a "lead agency may use models to estimate a project's vehicle miles traveled..." and as has been done for several decades under CEQA, lead agencies are responsible for deciding their choice of methodology to analyze impacts. OPR recommends that a reduction target per capita of 15 percent below that of either regional VMT or citywide VMT, whichever is higher, be used to determine if a residential project would have a transportation impact on the environment, consistent with Assembly Bill 32 (AB 32).

Based on OPR's recommendations, it is determined that a new land-use project would have a less-than-significant transportation impact if the project were to achieve either an average daily VMT per capita (resident) that is 15 percent less than the regional average daily VMT rate estimated for 2020, or 15 percent less than the city's average daily VMT rate in 2020, whichever is higher. If a project were to result in VMT rates that exceed both 15 percent-reduction thresholds, the project would be inconsistent with statewide and local environmental and transportation policies and would result in a significant transportation impact.

To address the recent changes in state law regarding transportation analysis for the purposes of CEQA established by SB 743, this EIR includes an analysis of Vehicle Miles Traveled (VMT). VMT is a measure used to describe automobile use on a daily or annual basis. General components of VMT include the number of vehicle trips and the length of those trips (trip distance). VMT is the product of the total number of vehicles traveling and the average number of miles traveled per vehicle. This can be calculated either per day or per year.

Residential VMT accounts for the entire home-back-to-home tour that includes the project, and this "tour-based" approach considers all trips, including trips to a workplace. VMT per capita is calculated by dividing total residential VMT by total persons (population). For purposes of this analysis and given the mixed-use nature of the project, the new population estimates to calculate projected-generated VMT and a VMT per capita rate includes both new residents and workers traveling to/from the project on a daily basis via automobile. Transportation infrastructure, or referred to as "roadway VMT" accounts for VMT attributed to induced vehicle travel (auto demand) generated by the addition of lane miles. Roadway (induced demand) VMT generally

occurs where roadway capacity is expanded. The evaluation of project VMT per person (capita) was measured relative to the baseline rates provided by the Metropolitan Transportation Commission (MTC) Travel Demand Model (“Travel Model One”).¹ The MTC model is an activity-based travel demand model that is widely used by counties and communities throughout the San Francisco Bay Area to develop jurisdiction-specific travel demand models, and the data is regularly validated for consistency among all nine counties.

MTC’s Travel Model One contains 1,454 Traffic Analysis Zones (TAZs) that span across the San Francisco Bay Area and rely on data from the Association of Bay Area Governments (ABAG), the U.S. Census, land use data, and additional transportation characteristics (i.e., parking cost and auto terminal time [travel time, distance]) to determine the average daily VMT per capita through 2040. MTC’s Travel Model One identifies 17 TAZs in Alameda, and the project site is located within TAZ 960. For purposes of this analysis, the VMT per capita and related metrics only pertain to the Baseline Year 2020.

Automobile Level of Service

As described in the Setting, traffic operations at intersections are measured in terms of a grading system called Level of Service (LOS), which is based on vehicle delay that is a function of the signal timing, intersection lane configuration, hourly traffic volumes, pedestrian volumes, and parking and bus conflicts among other factors. Calculated LOS does not always reflect the total volume of traffic that wishes to travel through the intersection, but instead is based on the volume of traffic that is counted travelling through the intersection during the peak hour. Congestion downstream from the intersections (on I-880 and in the Posey Tube) causes backups that constrain the number of vehicles that get through the intersections in an hour.

LOS has historically proven to be an inadequate measure in Alameda because residents experience delays certain intersections, yet the LOS analysis indicates that the level of service at that intersection is adequate. The delay that is being experienced is the result of downstream congestion, not a result of the intersection design or the volume of cars moving through the intersection.

Pedestrians Level of Service

The pedestrian patterns in the study area were analyzed during the peak commute hours of 7-9 AM and 4-6 PM, where the number of pedestrians crossing the intersection was noted, as well as which crosswalks they used. Potential impacts on pedestrian LOS were evaluated based on the HCM 2000 methodology for determining average delay for pedestrians at signalized study intersections (TRB, 2000). Pedestrian delay (in seconds per person) is based on the effective green signal time for pedestrians to cross each intersection leg, and the actuated cycle length of the signal. Pedestrian LOS grade and associated ranges of delay are shown in **Table 4.G-3**.

¹ The term “baseline” refers to a horizon or future year that does not include implementation of the project (e.g., Year 2010, 2020, 2030, etc.).

**TABLE 4.G-3
LEVEL OF SERVICE (LOS) CRITERIA FOR
PEDESTRIANS AT SIGNALIZED INTERSECTIONS**

LOS	Pedestrian Delay (seconds)
A	< 10
B	≥ 10 and ≤ 20
C	> 20 and ≤ 30
D	> 30 and ≤ 40
E	> 40 and ≤ 60
F	> 60

SOURCE: Transportation Research Board, 2000 Highway Capacity Manual, 2000

Bicycle Level of Service

Potential impacts on bicycle LOS were evaluated based on the Florida Department of Transportation methodology for assessing bicyclists' perceived level of comfort along study roadway segments (FDOT, 2013). Bicycle LOS scores are based on five variables: 1) average effective width of the outside through lane (and presence of bike lane); 2) motor vehicle volumes; 3) motor vehicle speeds; 4) truck volumes; and, 5) pavement conditions. The numerical bicycle LOS scores (tied to a LOS letter grade) are shown in **Table 4.G-4**.

**TABLE 4.G-4
LEVEL OF SERVICE (LOS) CRITERIA FOR
BICYCLES ON ROADWAY SEGMENTS**

LOS	Bicycle LOS Score
A	< 1.5
B	> 1.5 and ≤ 2.5
C	> 2.5 and ≤ 3.5
D	> 3.5 and ≤ 4.5
E	> 4.5 and ≤ 5.5
F	> 5.5

SOURCE: Florida Department of Transportation, 2009 Quality/Level of Service Handbook, 2009

Transit Level of Service

The 2000 *Highway Capacity Manual* arterial level-of-service analysis method (based on the average speed for the segment under consideration, computed from the running times on the street segment and the control delay of through movements at signalized intersections) was used to calculate the level of service along transit corridors in the project area (TRB, 2000). Transit LOS grade and associated ranges of delay are shown in **Table 4.G-5**.

**TABLE 4.G-5
LEVEL OF SERVICE (LOS) CRITERIA FOR
TRANSIT ON ROADWAY SEGMENTS**

LOS	Average Speed (miles/hour)
A	> 25
B	> 19 and ≤ 25
C	> 13 and ≤ 19
D	> 9 and ≤ 13
E	> 7 and ≤ 9
F	≤ 7

SOURCE: Transportation Research Board, 2000 Highway Capacity Manual, 2000

Alameda County Transportation Commission CMP LOS Standards for Monitoring

The ACTC Congestion Management Program (CMP) establishes LOS E as the standard for facilities under LOS monitoring in the CMP network. Certain segments are identified in the CMP as “grandfathered segments,” which were operating at LOS F during the p.m. peak in 1991 when existing LOSs were established for the CMP network. The following segments are included in the CMP Table 6 – LOS F Freeways for Alameda County CMP-Designated Roadway System:

- Southbound I-580 during p.m. peak between I-80/580 and I-980/SR 24: This encompasses the one I-580 analysis segment for the southbound direction during the p.m. peak.
- Southbound I-880 during p.m. peak between Washington Street and Hegenberger Road: This encompasses all but one of the I-880 analysis segments for the southbound direction during the p.m. peak. The I-880 segment west of Adeline Street is not within the grandfathered segment.
- Eastbound I-980 during the p.m. peak between I-880 and I-580: This encompasses the one I-980 analysis segment for the eastbound direction during the p.m. peak.

In addition to the freeway segments, CMP Table 7 – LOS F Arterial Segments, Alameda County CMP-Designated Roadway System, identifies southbound SR 260 (the Webster Tube) from Seventh and Webster Streets in Oakland to Atlantic Avenue in Alameda as such a “grandfathered” roadway segment.

The CMP also identifies a Deficiency Plan (a plan for prioritizing street or freeway improvements) as currently being implemented for the freeway connection between eastbound (northbound) SR 260 (the Posey Tube) and I-880 northbound, in Oakland. This I-880 Broadway / Jackson Interchange, ramp and circulation Improvements Study involves the ACTC, Caltrans, cities of Alameda and Oakland, BART, and AC Transit, and is evaluating multi-modal solutions to movement through and around Oakland’s Chinatown, including travel to and from the west end of Alameda.

Local Agency Thresholds

Because the CMP does not define the threshold of significance for locations that already exceed the LOS standard, local agencies can define the applicable significance criteria. The freeway facilities under analysis are located within Oakland, and the City of Oakland has analyzed traffic impacts on those facilities for several recent EIRs. The City of Oakland's CEQA Thresholds of Significance Guidelines has been applied for analyzing the freeway mainline segments and ramp merge/diverge areas identified for the nearby Alameda Point EIR analysis. The relevant criterion is:

For a roadway segment of the Congestion Management Program (CMP) Network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project.

The roadway impacts of the project would be considered significant if the addition of project-related traffic would result in a service level worse than LOS E, except where the roadway link was already at LOS F under existing without project conditions. For those locations where this existing without project condition is LOS F, the impacts of the project were considered significant if the contribution of project-related traffic represents three percent or more of the total traffic. This criterion has been included for the proposed project to address impacts along roadway segments currently operating under unacceptable levels and was developed based on professional judgment using a "reasonableness test" of daily fluctuations of traffic. Also a change of volume-to-capacity (V/C) ratio of 0.03 has been found to be the threshold for which a perceived change in congestion is observed. The V/C ratio is calculated by comparing the peak-hour link volume to the peak-hour capacity of the road link. That change is equivalent to about one-half of the change from one level of service to the next.

Northern Waterfront GPA EIR

The GPA EIR evaluated the environmental impacts of the buildout of the Northern Waterfront Area and Encinal Terminals and found that significant transportation impacts would result at local intersections and at the Estuary crossings on Park Street and at the Webster and Posey Tubes and in Oakland. To reduce the impact of the redevelopment of the Northern Waterfront, the GPA EIR required:

1. **Construction Period:** That the project would provide and adhere to construction traffic control plans to minimize construction period transportation impacts on adjacent neighborhoods. (Mitigation Measure TRN-1)
2. **Transportation Demand Management:** That the project provide transportation demand management strategies and funding to support those strategies to reduce transportation impacts and provide transportation alternatives, such as bus and shuttle services, and water transit facilities. (Northern Waterfront GPA and Mitigation Measure TRN-4b)
3. **Clement Avenue Truck Route:** That the project contribute to the construction of the Clement Avenue Extension to minimize transportation impacts with Alameda neighborhoods, enable the relocation of the Buena Vista truck route to Clement Avenue, and improve access to the Northern Waterfront. (Northern Waterfront GPA)

4. **Intersections:** That the project contribute to the signalization of intersections at the new intersection at Sherman, and the existing signals at the intersections of Entrance and Clement, Grand and Clement, and Entrance and Buena Vista. (Mitigation Measure TRN-2)
5. **Park Street Gateway:** That the project contribute to improvements on Park Street to reduce commute period congestion at the Park Street Bridge. (Mitigation Measure TRN-3)
6. **Webster Posey Tubes Gateway:** That the project would contribute to the improvements on the Oakland side of the Webster and Posey Tubes to reduce commute period congestion at the Webster and Posey Tubes. (Mitigation Measure TRN-4a)

A project-specific transportation impact analysis was prepared for the current proposed Encinal Terminals project which differs from the proposal considered in 2008 for the GPA EIR and is summarized herein. The transportation analysis for the proposed project evaluates new information of substantial importance about the proposed project or conditions that were not discussed or anticipated in the GPA EIR. The analysis identifies whether any of the existing mitigations should be amended or supplemented to further minimize the transportation impacts associated with the proposed project.

The GPA EIR found that the GPA would have no effect to air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks. Similarly, the proposed Encinal Terminals project would not change air traffic patterns, increase air traffic levels or result in a change in location that would result in substantial safety risks. Therefore, the project would result in no impact in this area, and this impact will not be discussed further.

Impact Analysis

Project Trip Generation

Table 4.G-6 compares the trip generation assumptions for the proposed project to those assumed for the Encinal Terminals site in the Northern Waterfront GPA EIR. Whereas the proposed project would develop multi-family residential housing, the project assumed in the Northern Waterfront GPA EIR would have been developed with primarily single-family housing. In addition, the proposed project would develop retail and recreational uses, but would not develop the 150,000 square feet of office uses that were originally assumed in the GPA EIR to be part of the project. Single-family residential and office uses generally have higher trip generation than residential and retail uses. The trip generation comparison indicates that the proposed project would have a net decrease in daily vehicle trips over the project assumed in the GPA EIR with 1,100 fewer daily trips anticipated under the proposed project. The proposed project would have 257 fewer a.m. peak hour trips, and 247 fewer p.m. peak hour trips.

Trip Distribution

Figure 4.G-2 shows the trip distribution assumptions developed for the proposed project. The project-related traffic volumes are highest at the project entrance, and tend to dissipate among roads farther from the project site. According to the U.S. Census, approximately 65 percent of the work trips in the area are more than 20 minutes in duration and would therefore most likely travel

**TABLE 4.G-6
PROJECT VEHICLE TRIP GENERATION**

Land Use	ITE Code	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Assumed Encinal Project (in Northern Waterfront GPA EIR)									
Single Family	210	165 Units	1,580	31	93	124	104	61	165
Retail	826	50,000 sq. ft.	2,216	60	76	136	141	110	251
Office	710	150,000 sq. ft.	1,652	205	28	233	38	186	224
Total Trip Generation			5,448	296	197	493	283	357	640
Proposed Encinal Terminals Project									
Multi-Family	223	500 Units	2,100	47	103	150	113	82	195
Townhomes	210	89	848	17	50	67	56	33	89
Retail/Commercial	820	50,000 sq. ft.	2,136	30	18	48	90	96	186
Reduction for Pass-By/ Non-Auto Trip		34 percent	-726	-10	-6	-16	-30	-33	-63
Adjusted Retail	-	-	1,410	20	12	32	60	63	123
Marina	420	160 berths	474	4	9	13	18	12	30
Reduction for Captured Trips ^a		10 percent	-484	-9	-17	-26	-25	-19	-44
Total Trip Generation			4,348	79	157	236	222	171	393
Net Change to Trip Generation			-1,100	-217	-40	-257	-61	-186	-247

^a Trip Generation Handbook, Second Edition, Institute of Transportation Engineers, Washington D.C., June, 2004. See Table B.2

SOURCE: Abrams Associates, 2017

off the island. This analysis further estimates 35 percent of recreational and other trips would leave the island. In total, it is estimated that 57 percent of trips would travel off the island of Alameda, which is higher than what was previously assumed in the Northern Waterfront GPA EIR (37 percent).

Impact 4.G-1. The proposed project would not exceed both the existing city household VMT per capita minus 15 percent and the regional VMT per capita minus 15 percent. The project would have a less than significant impact on VMT.

The City of Alameda has a lower per capita VMT than the region, and the northern waterfront neighborhood (TAZ 960), which includes the Encinal Terminals site, has a lower per capita VMT than the rest of the City. Within the Bay Area region, cities like Alameda, Berkeley, Oakland, and San Francisco at the geographic center of the Bay Area region and closest to the regional job



SOURCE: Abrams Associates

Encinal Terminals . 130007

Figure 4.G-2
Project Trip Distribution

centers with more urban, mixed use neighborhoods, generate a lower per capita VMT than the Bay Area cities located at the edges of the region, such as Livermore, Dublin, and similar cities whose residents have longer commutes to their jobs in the inner Bay Area and live in automobile-oriented suburban neighborhoods that require multiple automobile trips for all or most daily activities. Within Alameda, the neighborhoods on the main island, including TAZ 960 in the northern waterfront, that have easy access and proximity to transit, commercial services, and other daily needs, have a lower average per capita VMT than the City average. The neighborhoods at Harbor Bay and Bay Farm Island, which display a more suburban style neighborhood design with less multifamily housing and less proximity to transit and services, have a higher per capita VMT than the City average.

According to the Metropolitan Transportation Commission Travel One Model (2016), the average daily regional VMT per capita is projected to be 14.9 in 2020 (see **Table 4.G-7**); it is currently 17.2. The City of Alameda's projected average daily VMT per capita in 2020 will be 14.1; it is currently 13.0. The average daily VMT per capita for TAZ 960 (northern waterfront) will be 12.3 in 2020. A project-specific analysis prepared for the Encinal Terminals Project (see **Appendix F**) found that the Encinal Terminals project, once fully constructed and occupied in 2020 would have an average per capita VMT of 12.3. Therefore, the Encinal Terminals project would have the effect of lowering the regional average per capita VMT and the citywide average per capita VMT.

**TABLE 4.G-7
AVERAGE DAILY VMT PER CAPITA–
YEAR 2020 PROJECTIONS**

Analysis Zone	Metric	Year 2020 Average VMT
Project TAZ 960	Per Capita	12.3
City of Alameda	Per Capita	14.1
	(minus 15%)	12.0
Region	Per Capita	14.9
	(minus 15%)	12.7

SOURCE: MTC Travel One Model, 2016.

Furthermore, a 12.3 per capita VMT represents a project VMT that is less than the regional VMT minus 15 percent and is comparable to the citywide average minus 15 percent. Therefore, the proposed project would not exceed both the existing citywide household VMT per capita minus 15 percent and the regional VMT per capita minus 15 percent and would have a less than significant impact on VMT.

Furthermore, the analysis findings that the project would result in a 12.3 VMT does not take into consideration the effect of the project's proposed transportation demand management (TDM) program, which includes: annual funding for supplemental transit services for project residents, participation in a Transportation Management Association (TMA) to coordinate and promote transit and alternative modes of travel to project residents and provide shuttle or bus service (via AC Transit or private bus shuttle and/or water shuttle) to BART on Day One, and annual

reporting to the City evaluating the effectiveness of the TDM measures. If these additional project services result in a decrease in project per capita VMT of 0.3 or more, the project per capita VMT will be less than the citywide average VMT minus 15 percent as well.

Mitigation: None required.

Impact 4.G-2: Automobile Level of Service (LOS). The proposed project would cause an intersection Level of Service to degrade to LOS E or F, or would increase traffic volumes by 3 percent or more at an intersection that is currently operating at LOS E or F. This is a significant and unavoidable impact.

The 2008 Northern Waterfront General Plan EIR found that redevelopment of the northern waterfront and the Encinal Terminals site would result in significant and unavoidable impacts to local and regional intersection levels of service.

As shown in Table 4.G-6, the Encinal Terminals project as proposed in 2016 would generate fewer overall automobile trips than the Encinal Terminals project considered in the 2008 EIR. However, although the 2016 proposal results in a significant decrease in commercial trips, the 2016 proposal's increase in residential trips will cause the AM morning commute impacts to be more severe than those associated with the 2008 proposal. Therefore, the proposed project will result in significant impacts to automobile intersection levels of service.

The following project specific analysis assumes:

- The Encinal Terminals project is fully constructed and fully occupied by approximately 2020. By 2020, the Clement Avenue extension will be completed between the Entrance Road project entrance and Atlantic Avenue, providing direct access to the Webster and Posey Tubes without the need for automobiles to travel on Buena Vista Avenue. The Clement extension through the Shell Oil property will not yet be completed, requiring automobiles to travel on Buena Vista to access points to the east, including the Park Street Bridge.
- By 2020, the first two phase of the Alameda Landing Mixed-Use Development will be completed and occupied (the retail center and the 285 Tripoint residential units). By 2035, the third and final waterfront phase will be completed.
- By 2020, the Alameda Point Site A Project with 800 residential units and 200,000 square feet of commercial and retail would be completed and occupied, and the Veteran's Affairs Clinic and National Cemetery (158,000 square-foot outpatient clinic with an 80-acre cemetery) will be completed. By 2035, Alameda Point will be fully-developed with 1,425 residential units and 5 million square feet of non-residential use.
- By 2020, the 89-unit Marina Shores residential development on Buena Vista Avenue east of the project, the 182-unit Boatworks project on Clement Avenue and Oak Street, the 380-unit mixed-use Del Monte project, the 9-unit 1435 Webster mixed-use project, the 290-unit Shipways project, the 22-unit Housing Authority project on Eagle Avenue, and the 670-unit mixed-use Alameda Marina Project will all be completed and occupied.

- The City of Alameda will continue to implement the Citywide Development Impact Fee Ordinance, which requires all new residential and commercial development in the City to fund a fair share of the transportation improvements necessary to support the redevelopment of former industrial sites along the Northern Waterfront and federal military properties in West Alameda.

As shown in **Tables 4.G-8a** and **4.G-8b** Existing 2016 Conditions (AM and PM Peak Hour, respectively), **Tables 4.G-9a** and **4.G-9b** 2020 Conditions (AM and PM Peak Hour, respectively), and **Tables 4.G-10a** and **4.G-10b** 2035 Conditions (AM and PM Peak Hour, respectively), most Alameda intersections currently operate with acceptable levels of service during the peak commute hours and will continue to do so in 2020 and 2035 with and without the Encinal Terminals project. The detailed LOS calculation sheets for each study intersection are presented in Appendix F. There are, however, intersections where traffic LOS conditions would be unacceptable without and with the project; those intersections are shown in the LOS summary tables that follow, and are described in text after those table.

With development of the Encinal Terminals project and other local and regional developments, those intersections that provide access to the limited number of Estuary Crossings located adjacent to the Webster and Posey Tubes and the Park Street Bridge, both of which provide access to the I-880 freeway and the regional roadway system, would continue to experience unacceptable level of service conditions. The Encinal Terminals project traffic contributes to these worsening conditions. The Encinal Terminals project would continue to contribute to significant intersection impacts at the locations identified in the 2008 GPA EIR. Although the trip generation tables indicate that the contribution to those impacts in the PM period would decrease, the contribution to outbound trips from the project residence to jobs off the island in the AM period would increase; thereby making the impact more severe.

The Encinal Terminals project would also have a significant impact at the intersection of Buena Vista Avenue and Entrance Road (#7). Because the 2020 Baseline does not assume that the Clement Avenue extension is continued through the Shell Oil property, most southbound automobiles from the project site, and automobiles arriving from the Park Street Bridge, are passing through the intersection of Buena Vista Avenue and Entrance Road, causing a significant impact.

The Encinal Terminals project would also have a significant impact at the intersection of Atlantic Avenue and Challenger Drive (#10), which would operate at unacceptable LOS during both peak traffic hours under Cumulative 2035 conditions. The increase in traffic volumes due to the project would exceed the 3-percent threshold of significance, and therefore the project impact would be significant. While TDM measures would reduce vehicle trips through the intersection, they would not be enough to mitigate the impact to a less-than-significant level. Likewise, there is no feasible physical change to the intersection that would mitigate the impact, and the impact would be significant and unavoidable.

TABLE 4.G-8a
EXISTING 2016 PLUS PROJECT AM PEAK HOUR INTERSECTION LEVEL OF SERVICE

Study Intersection		Traffic Control	Existing		Existing + Project	
			Delay ^a	LOS	Delay ^a	LOS
1	Clement Avenue & Stanton Street	<i>Future Intersection</i>	N/A	N/A	N/A	N/A
2	Clement Avenue & Ohlone Street	Side Street Stop	8.3	A	8.3	A
3	Clement Avenue & Grand Street	Side Street Stop	11.4	B	11.4	B
4	Clement Avenue and Entrance Street	<i>Future Intersection</i>	N/A	N/A	N/A	N/A
5	Clement Avenue & Sherman Street	<i>Future Intersection</i>	N/A	N/A	N/A	N/A
6	Buena Vista Avenue & Sherman Street	Traffic Signal	13.2	B	15.2	B
7	Buena Vista Avenue & Entrance Street	Side Street Stop	13.7	B	26.1	D
8	Buena Vista Avenue & Stanton Street	Side Street Stop	17.0	C	19.3	C
9	Buena Vista Avenue & Grand Street	Traffic Signal	8.8	A	9.8	A
10	Atlantic Avenue & Challenger Drive	Traffic Signal	8.7	A	10.7	A
11	Challenger Drive & Marina Village Drive	Traffic Signal	18.1	B	18.9	B
12	Atlantic Avenue & Constitution Way	Traffic Signal	15.3	B	16.8	B
13	Constitution Way & Marina Village Drive	Traffic Signal	13.3	B	13.6	B
14	Atlantic Avenue & Webster Street	Traffic Signal	23.1	C	23.4	C
15	Willie Stargell Avenue & Webster Street	Traffic Signal	7.5	A	7.5	A
16	Park Street & Clement Avenue	Traffic Signal	33.5	C	33.8	C
17	Park Street & Blanding Avenue	Traffic Signal	56.7	E	59.0	E
18	Blanding Avenue & Tilden Way	Traffic Signal	15.0	B	15.3	B
19	Broadway & 5th Street (Oakland)	Traffic Signal	24.2	C	24.8	C
20	Harrison Street & 7th Street (Oakland)	Traffic Signal	41.4	D	46.5	D
21	Buena Vista Avenue & Webster Street	Traffic Signal	9.8	A	9.9	A
22	Buena Vista Avenue & Park Street	Traffic Signal	12.1	B	13.2	B
23	Jackson Street & 6th Street (Oakland)	Traffic Signal	18.8	B	21.7	C

NOTES:

^a The LOS/Delay for Side-Street Stop-Control (SSSC) intersections represents the worst movement or approach; for Signalized intersections, the LOS/Delay represents the overall intersection.

Bold indicates locations with unacceptable level of service; **Shaded Bold** indicates significant impacts.

SOURCE: Abrams Associates, 2017.

TABLE 4.G-8b
EXISTING 2016 PLUS PROJECT PM PEAK HOUR INTERSECTION LEVEL OF SERVICE

Study Intersection		Traffic Control	Existing		Existing + Project	
			Delay ^a	LOS	Delay ^a	LOS
1	Clement Avenue & Stanton Street	<i>Future Intersection</i>	N/A	N/A	N/A	N/A
2	Clement Avenue & Ohlone Street	Side Street Stop	8.3	A	8.3	A
3	Clement Avenue & Grand Street	Side Street Stop	13.1	B	13.1	B
4	Clement Avenue and Entrance Street	<i>Future Intersection</i>	N/A	N/A	N/A	N/A
5	Clement Avenue & Sherman Street	<i>Future Intersection</i>	N/A	N/A	N/A	N/A
6	Buena Vista Avenue & Sherman Street	Traffic Signal	16.6	B	19.4	B
7	Buena Vista Avenue & Entrance Street	Side Street Stop	26.8	D	>50.0	F
8	Buena Vista Avenue & Stanton Street	Side Street Stop	20.2	C	24.8	D
9	Buena Vista Avenue & Grand Street	Traffic Signal	9.9	A	11.9	B
10	Atlantic Avenue & Challenger Drive	Traffic Signal	14.3	B	15.5	B
11	Challenger Drive & Marina Village Drive	Traffic Signal	17.5	B	18.0	B
12	Atlantic Avenue & Constitution Way	Traffic Signal	15.9	B	16.6	B
13	Constitution Way & Marina Village Drive	Traffic Signal	13.2	B	13.8	B
14	Atlantic Avenue & Webster Street	Traffic Signal	25.9	C	26.2	C
15	Willie Stargell Avenue & Webster Street	Traffic Signal	7.8	A	7.9	A
16	Park Street & Clement Avenue	Traffic Signal	34.6	C	34.7	C
17	Park Street & Blanding Avenue	Traffic Signal	25.4	C	26.2	C
18	Blanding Avenue & Tilden Way	Traffic Signal	19.0	B	19.9	B
19	Broadway & 5th Street (Oakland)	Traffic Signal	65.2	E	72.6	E
20	Harrison Street & 7th Street (Oakland)	Traffic Signal	21.1	C	23.8	C
21	Buena Vista Avenue & Webster Street	Traffic Signal	7.3	A	7.4	A
22	Buena Vista Avenue & Park Street	Traffic Signal	10.1	B	11.3	B
23	Jackson Street & 6th Street (Oakland)	Traffic Signal	68.4	E	>80.0	F

NOTES:

^a The LOS/Delay for Side-Street Stop-Control (SSSC) intersections represents the worst movement or approach; for Signalized intersections, the LOS/Delay represents the overall intersection.

Bold indicates locations with unacceptable level of service; **Shaded Bold** indicates significant impacts.

SOURCE: Abrams Associates, 2017.

TABLE 4.G-9a
BASELINE (2020) PLUS PROJECT AM PEAK HOUR INTERSECTION LEVEL OF SERVICE

Study Intersection		Traffic Control	Baseline		Baseline + Project	
			Delay ^a	LOS	Delay ^a	LOS
1	Clement Avenue & Stanton Street	Side Street Stop	8.3	A	8.3	A
2	Clement Avenue & Ohlone Street	Side Street Stop	8.4	A	8.4	A
3	Clement Avenue & Grand Street	Side Street Stop	11.6	B	11.6	B
4	<i>Clement Avenue and Entrance Street</i>	<i>Future Intersection</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
5	<i>Clement Avenue & Sherman Street</i>	<i>Future Intersection</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
6	Buena Vista Avenue & Sherman Street	Traffic Signal	19.4	B	22.7	C
7	Buena Vista Avenue & Entrance Street	Side Street Stop	22.7	C	>50.0	F
8	Buena Vista Avenue & Stanton Street	Side Street Stop	24.9	C	30.3	D
9	Buena Vista Avenue & Grand Street	Traffic Signal	11.9	B	13.7	B
10	Atlantic Avenue & Challenger Drive	Traffic Signal	12.2	B	13.4	B
11	Challenger Drive & Marina Village Drive	Traffic Signal	19.5	B	19.9	B
12	Atlantic Avenue & Constitution Way	Traffic Signal	22.3	C	20.6	C
13	Constitution Way & Marina Village Drive	Traffic Signal	13.5	B	13.8	B
14	Atlantic Avenue & Webster Street	Traffic Signal	38.6	D	39.1	D
15	Willie Stargell Avenue & Webster Street	Traffic Signal	6.8	A	6.8	A
16	Park Street & Clement Avenue	Traffic Signal	45.6	D	47.4	D
17	Park Street & Blanding Avenue	Traffic Signal	66.0	E	66.6	E
18	Blanding Avenue & Tilden Way	Traffic Signal	25.4	C	25.9	C
19	Broadway & 5th Street (Oakland)	Traffic Signal	28.7	C	29.7	C
20	Harrison Street & 7th Street (Oakland)	Traffic Signal	56.2	E	61.7	E
21	Buena Vista Avenue & Webster Street	Traffic Signal	10.7	B	10.9	B
22	Buena Vista Avenue & Park Street	Traffic Signal	14.2	B	15.3	B
23	Jackson Street & 6th Street (Oakland)	Traffic Signal	30.4	C	31.85	C

NOTES:

^a The LOS/Delay for Side-Street Stop-Control (SSSC) intersections represents the worst movement or approach; for Signalized intersections, the LOS/Delay represents the overall intersection.

Bold indicates locations with unacceptable level of service; **Shaded Bold** indicates significant impacts.

SOURCE: Abrams Associates, 2017.

TABLE 4.G-9b
BASELINE (2020) PLUS PROJECT PM PEAK HOUR INTERSECTION LEVEL OF SERVICE

Study Intersection		Traffic Control	Baseline		Baseline + Project	
			Delay ^a	LOS	Delay ^a	LOS
1	Clement Avenue & Stanton Street	Side Street Stop	8.3	A	8.3	A
2	Clement Avenue & Ohlone Street	Side Street Stop	8.3	A	8.3	A
3	Clement Avenue & Grand Street	Side Street Stop	13.5	B	13.5	B
4	Clement Avenue and Entrance Street	<i>Future Intersection</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
5	<i>Clement Avenue & Sherman Street</i>	<i>Future Intersection</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
6	Buena Vista Avenue & Sherman Street	Traffic Signal	28.1	C	34.2	C
7	Buena Vista Avenue & Entrance Street	Side Street Stop	>50.0	F	>50.0	F
8	Buena Vista Avenue & Stanton Street	Side Street Stop	24.9	C	34.5	D
9	Buena Vista Avenue & Grand Street	Traffic Signal	17.4	B	24.6	C
10	Atlantic Avenue & Challenger Drive	Traffic Signal	18.9	B	22.8	C
11	Challenger Drive & Marina Village Drive	Traffic Signal	19.0	B	19.4	B
12	Atlantic Avenue & Constitution Way	Traffic Signal	25.6	C	26.2	C
13	Constitution Way & Marina Village Drive	Traffic Signal	13.5	B	14.1	B
14	Atlantic Avenue & Webster Street	Traffic Signal	30.3	C	30.8	C
15	Willie Stargell Avenue & Webster Street	Traffic Signal	7.3	A	7.4	A
16	Park Street & Clement Avenue	Traffic Signal	37.0	S	37.5	D
17	Park Street & Blanding Avenue	Traffic Signal	32.4	C	34.2	C
18	Blanding Avenue & Tilden Way	Traffic Signal	29.0	C	32.0	C
19	Broadway & 5th Street (Oakland)	Traffic Signal	>80	F	>80	F
20	Harrison Street & 7th Street (Oakland)	Traffic Signal	59.5	E	65.0	E
21	Buena Vista Avenue & Webster Street	Traffic Signal	8.0	A	8.2	A
22	Buena Vista Avenue & Park Street	Traffic Signal	12.7	B	14.6	B
23	Jackson Street & 6th Street (Oakland)	Traffic Signal	>80.0	F	>80.0	F

NOTES:

^a The LOS/Delay for Side-Street Stop-Control (SSSC) intersections represents the worst movement or approach; for Signalized intersections, the LOS/Delay represents the overall intersection.

Bold indicates locations with unacceptable level of service; **Shaded Bold** indicates significant impacts.

SOURCE: Abrams Associates, 2017.

TABLE 4.G-10a
CUMULATIVE (2035) AM PEAK HOUR INTERSECTION LEVEL OF SERVICE

Study Intersection		Control	2035 No Project		2035 + Project	
			Delay ^a	LOS	Delay ^a	LOS
1	Clement Avenue & Stanton Street	Side Street Stop	30.6	D	33.4	D
2	Clement Avenue & Ohlone Street	Side Street Stop	23.3	C	25.8	D
3	Clement Avenue & Grand Street	Traffic Signal	11.5	B	11.5	B
4	Clement Avenue and Entrance Street	Traffic Signal	7.4	A	10.7	B
5	Clement Ave & Sherman Street	Traffic Signal	23.3	C	24.3	C
6	Buena Vista Avenue & Sherman Street	Traffic Signal	17.7	B	17.8	B
7	Buena Vista Avenue & Entrance Street	Side Street Stop	14.9	B	17.8	C
8	Buena Vista Avenue & Stanton Street	Side Street Stop	16.5	C	17.8	C
9	Buena Vista Avenue & Grand Street	Traffic Signal	13.5	B	14.8	B
10	Atlantic Avenue & Challenger Drive	Traffic Signal	61.0	E	79.7	E
11	Challenger Drive & Marina Village Drive	Traffic Signal	20.6	C	19.0	B
12	Atlantic Avenue & Constitution Way	Traffic Signal	22.7	C	23.2	C
13	Constitution Way & Marina Village Drive	Traffic Signal	13.5	B	13.8	B
14	Atlantic Avenue & Webster Street	Traffic Signal	39.7	D	40.4	D
15	Willie Stargell Avenue & Webster Street	Traffic Signal	6.9	A	6.9	A
16	Park Street & Clement Avenue	Traffic Signal	>80.0	F	>80.0	F
17	Park Street & Blanding Avenue	Traffic Signal	>80.0	F	>80.0	F
18	Blanding Avenue & Tilden Way	Traffic Signal	>80.0	F	>80.0	F
19	Broadway & 5th Street (Oakland)	Traffic Signal	>80.0	F	>80.0	F
20	Harrison Street & 7th Street (Oakland)	Traffic Signal	45.7	D	50.4	D
21	Buena Vista Avenue & Webster Street	Traffic Signal	12.9	B	13.1	B
22	Buena Vista Avenue & Park Street	Traffic Signal	16.2	B	16.8	B
23	Jackson Street & 6th Street (Oakland)	Traffic Signal	>80.0	F	>80.0	F

NOTES:

^a The LOS/Delay for Side-Street Stop-Control (SSSC) intersections represents the worst movement or approach; for Signalized intersections, the LOS/Delay represents the overall intersection.

Bold indicates locations with unacceptable LOS; **Shaded Bold** indicates significant impacts.

SOURCE: Abrams Associates, 2017.

TABLE 4.G-10b
CUMULATIVE (2035) PM PEAK HOUR INTERSECTION LEVEL OF SERVICE

Study Intersection		Control	2035 No Project		2035 + Project	
			Delay ^a	LOS	Delay ^a	LOS
1	Clement Avenue & Stanton Street	Side Street Stop	21.4	C	24.2	C
2	Clement Avenue & Ohlone Street	Side Street Stop	18.2	C	20.2	C
3	Clement Avenue & Grand Street	Traffic Signal	12.7	B	12.7	B
4	Clement Avenue and Entrance Street	Traffic Signal	8.8	A	14.0	B
5	Clement Ave & Sherman Street	Traffic Signal	21.2	C	23.7	C
6	Buena Vista Avenue & Sherman Street	Traffic Signal	16.8	B	17.2	B
7	Buena Vista Avenue & Entrance Street	Side Street Stop	>50.0	F	>50.0	F
8	Buena Vista Avenue & Stanton Street	Side Street Stop	22.6	C	25.6	C
9	Buena Vista Avenue & Grand Street	Traffic Signal	14.4	B	17.5	B
10	Atlantic Avenue & Challenger Drive	Traffic Signal	68.4	E	>80.0	F
11	Challenger Drive & Marina Village Drive	Traffic Signal	23.5	C	24.1	C
12	Atlantic Avenue & Constitution Way	Traffic Signal	36.9	D	37.6	D
13	Constitution Way & Marina Village Drive	Traffic Signal	13.5	B	14.1	B
14	Atlantic Avenue & Webster Street	Traffic Signal	36.0	D	36.7	D
15	Willie Stargell Avenue & Webster Street	Traffic Signal	16.0	B	16.1	B
16	Park Street & Clement Avenue	Traffic Signal	>80.0	F	>80.0	F
17	Park Street & Blanding Avenue	Traffic Signal	>80.0	F	>80.0	F
18	Blanding Avenue & Tilden Way	Traffic Signal	>80.0	F	>80.0	F
19	Broadway & 5th Street (Oakland)	Traffic Signal	72.2	E	77.4	E
20	Harrison Street & 7th Street (Oakland)	Traffic Signal	>80.0	F	>80.0	F
21	Buena Vista Avenue & Webster Street	Traffic Signal	9.1	A	9.2	A
22	Buena Vista Avenue & Park Street	Traffic Signal	14.4	B	15.2	B
23	Jackson Street & 6th Street (Oakland)	Traffic Signal	>80.0	F	>80.0	F

NOTES:

^a The LOS/Delay for Side-Street Stop-Control (SSSC) intersections represents the worst movement or approach; for Signalized intersections, the LOS/Delay represents the overall intersection.

Bold indicates locations with unacceptable LOS; **Shaded Bold** indicates significant impacts.

SOURCE: Abrams Associates, 2017.

For study intersections #10 through #23, the project trip assignment under cumulative (2035) plus Project conditions is identical to that previously shown for the Baseline (2020) plus Project conditions. However, the project trip assignment for study intersections #1 through #9 (in the immediate site vicinity) would be different under Cumulative plus Project conditions because of the extension of Clement Avenue (i.e., a continuous Clement Avenue extension connecting to Atlantic Avenue). This would provide an alternative to Buena Vista Avenue for east-west travel in the project area.

The addition of project trips to the peak-hour volumes at Intersections #17, #19 and #23 (for Existing, Baseline 2020 and Cumulative 2035 conditions) would be under the 3-percent threshold of significance as defined in the Transportation Element of the City's General Plan, and the project impact would be less than significant. The addition of project trips to the peak-hour volumes at Intersection #20 (for Baseline 2020 conditions) likewise would be under the 3-percent threshold of significance, and the project impact would be less than significant. Lastly, the addition of project trips to the peak-hour volumes at Intersections #16 and #18 (for Cumulative 2035 conditions) would be under the 3-percent threshold of significance, and the project impact would be less than significant. The GPA EIR identified the several mitigations for projects located in the Northern Waterfront GPA area to reduce the significant unavoidable level of service impacts resulting from redevelopment of the Northern Waterfront. This project-specific analysis recommends the following revised set of project-specific mitigations, to minimize the project-specific significant unavoidable impacts on automobile level of service:

GPA EIR Mitigation Measure TRN-4b (revised): Transportation Demand Management. To reduce the number of automobile trips generated by the project and reduce automobile level of service impacts at the Webster Street and Park Street gateways to the City, require that the project include a Transportation Demand Management Plan and funding program for Planning Board review and approval. The TDM plan should include a suite of measures intended to reduce vehicle trips by project residents, employees, and visitors to the site, that may include but are not limited to the following:

- Annual funding for operations of transit services between the site, the Northern waterfront area, and Oakland BART stations.
- AC Transit Easy Passes for all project residents and employees.
- On-Site Car Share Parking
- On-Site Bicycle Parking
- Dedicated on-site carpool parking
- Residential Website/Source for Transportation Info
- Collaborative Work Space
- Unbundled Parking
- On-Site Transportation Coordinator
- Transportation "Welcome Packet"
- Real-Time Transit Information (e.g., TransitScreen)

- Designated Pick-Up/Drop-Off Ridesourcing Services
- Pre-Tax Commuter Benefits
- Transit Pass Subsidy Program (e.g., AC Transit EasyPass)
- The Planning Board may also consider a congestion pricing system to increase the cost for automobile entering or leaving the project site during peak commute hours.
- Implementation and monitoring protocols to ensure progress on the implementation of each measure is tracked. The effectiveness of each measure shall also be studied so that the plan may be adjusted over time to continue to reduce the project's contribution to citywide and regional vehicle trips through the life of the project.

NEW Mitigation Measure 4.G-2: To minimize automobile level of service impacts in the vicinity of the project require that the project signalize the intersections at Entrance and Clement and at Entrance and Buena Vista. If the project or other parties construct the final extension of Clement Avenue through the Shell Oil facility, the signalization of Entrance and Buena Vista may not be necessary. The completion of the extension will reduce automobile and truck trips on Buena Vista and eliminate the need for southbound vehicles from the project to use the Buena Vista.

New Mitigation Measure 4. G-3 To minimize automobile level of service impacts in the vicinity of the project require the Encinal Terminals project to pay for a fair share of the Clement Extension project including fair share contribution to the completion of the Clement Avenue Extension (pedestrian, bicycle, transit, and automobile extensions) and intersection signalization from Atlantic Avenue to Grand Avenue. If the Del Monte project fails to begin construction of the Clement Avenue extension from Atlantic to Entrance Road prior to approval of the Encinal Terminals project, require the Encinal Terminals project to construct the extension with a later fair share contribution to be provided by the Del Monte project and other developments within the area.

NEW Mitigation Measure 4.G-4: To minimize automobile level of service impacts at the Webster Street and Park Street gateways to the City, require the Encinal Terminals project to pay a fair share contribution to citywide transportation improvements identified in the Citywide Development Impact Fee Ordinance. (Mitigation Measure TRN-3)

With the above mitigation measures, the impacts of the project on intersection levels of service will be lessened, but they will remain Significant and Unavoidable.

Impact 4.G-3. Implementation of the proposed project would cause the Pedestrian LOS to degrade to worse than LOS B, and would cause the average delay for pedestrians to increase by 10 percent or more where the service level is already LOS C or worse, but would not create a safety hazard for pedestrians. Less than Significant After Mitigation.

The threshold for determining the level of impact for the proposed project is:

- Would the project cause the Pedestrian LOS to degrade to worse than LOS B (or increase the delay by 10 percent or more if the service level is LOS C or worse without the project) at a signalized intersection or create a safety hazard for pedestrians?

Table 4.G-11 compares the pedestrian LOS for existing with existing plus project conditions for the following locations where a significant impact was identified. The pedestrian impacts identified below are caused by existing automated “actuated” traffic signals, which would automatically adjust the signal timing to accommodate the additional traffic volume generated by the project. The automatic adjustments result in longer delay for pedestrians crossing the street. The longer pedestrian delays at the following intersections are considered significant pedestrian impacts under the City of Alameda pedestrian thresholds. However, it should be noted that the impact at Buena Vista Avenue and Sherman Street would be eliminated once Clement Avenue is extended to connect with Atlantic Avenue at Sherman Street.

- 6. Buena Vista Avenue at Sherman Street
- 11. Challenger Drive at Marina Village Drive

**TABLE 4.G-11
EXISTING PLUS PROJECT PEDESTRIAN LEVELS OF SERVICE (LOS) BY CROSSWALK**

Intersection	Peak Hour	Scenario	South		North		East		West	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6. Buena Vista Avenue & Sherman Street	AM	Existing	7.7	A	11.7	B	10.5	B	10.5	B
		Plus Project	7.5	A	12.1	B	12.9	B	12.9	B
	PM	Existing	6.2	A	18.1	B	15.6	B	15.6	B
		Plus Project	6.4	A	22.5	C	18.3	B	18.3	B
11. Challenger Drive & Marina Village Drive	AM	Existing	19.0	B	7.8	A	13.7	B	13.7	B
		Plus Project	21.0	C	7.4	A	15.2	B	15.2	B
	PM	Existing	14.9	B	9.8	A	14.9	B	14.9	B
		Plus Project	17.3	B	8.1	A	18.5	B	18.3	B

NOTE: Shading indicates a significant impact due to degradation of pedestrian level of service.

SOURCE: Abrams Associates, 2016.

Although the proposed project would increase vehicle and pedestrian traffic in the project vicinity, it does not include any changes to the configuration of any existing intersections, nor does it include the removal of any pedestrian crossings or introduce any new safety hazards for pedestrians. The mitigation to install a new signalized crossing at Buena Vista Avenue and Entrance Road would enhance pedestrian safety in the area. It should also be noted that Northern Waterfront GPA EIR identified the potential for pedestrian impacts in Oakland’s Chinatown, but concluded the project would not result in any significant impacts. In addition of Revised Mitigation Measure 4.G-1, implementation of the following mitigation measures would reduce impacts related to pedestrian travel to a less-than-significant level:

NEW Mitigation Measure 4.G-3a: Prior to project occupancy, the project applicant shall fund the signal optimization at the Buena Vista Avenue and Sherman Street intersection during the p.m. peak hour to reduce pedestrian delays.

NEW Mitigation Measure 4.G-3b: Prior to project occupancy, the project applicant shall fund the signal optimization at the Challenger Drive and Marina Village Drive intersection during the p.m. peak hour to reduce pedestrian delays.

Impact 4.G-4. Implementation of the proposed project would not cause the Bicycle segment LOS to degrade to worse than LOS B or create a safety hazard for bicyclists. (Less than Significant)

The threshold for determining the level of impact for the proposed project is:

- Would the increase in automobile trips cause the Bicycle segment LOS to degrade to worse than LOS B or create a safety hazard for bicyclists?

The results of the bicycle LOS calculations are presented in **Table 4.G-12** for each of the roadway segments where bicycle conditions were analyzed. This table compares the bicycle analysis results for no project conditions with plus project conditions. As seen in the table, some of the roadway segments that were studied are forecast to operate at LOS D during the a.m. and/or p.m. peak hour. However, the addition of project trips to the peak-hour volumes at these intersections would not cause the bicycle LOS score to increase by more than the 10 percent threshold considered to result in significant impacts as per the Transportation Element of the City's General Plan. Although the proposed project would increase vehicle and pedestrian traffic in the project vicinity, it is not expected to significantly affect or change the design of any existing bicycle facilities or create any new safety problems for bicyclists in the area, as new facilities would be built to engineering standards. The completion of the Clement Avenue Extension would extend the Atlantic Avenue bicycle lane past the project site and along the waterfront. Based on the City's significance criteria, there would be no significant project impacts to bicycle travel in the area.

Mitigation: None required.

Impact 4.G-5. Implementation of the proposed project could not cause travel speeds to decrease by 10 percent or more along a street segment that currently serves as a transit route or is planned to serve as a transit route. (Less than Significant)

The threshold for determining the level of impact for the proposed project is:

- Would the increase in automobile trips cause travel speeds to degrade by 10 percent or more along a street segment that currently serves as a transit route or is planned to serve as a transit route?

The results of the transit LOS calculations are presented in **Table 4.G-13** for each of the roadway segments where the project could potentially have a significant impact on transit service. This table compares the transit analysis results with and without the proposed project. As seen in the table, the project contribution to the key roadway segments that were studied would not result in a change to travel speeds that exceeds the 10 percent threshold of significance. As a result, the project would not result in any significant impacts to transit service in the area.

Mitigation: None required.

**TABLE 4.G-12
EXISTING PLUS PROJECT BICYCLE LEVELS OF SERVICE (LOS)**

Segment	Peak Hour	Scenario	Northbound / Westbound			Southbound / Eastbound		
			Bike Score	LOS	% Change in Bike Score	Bike Score	LOS	% Change in Bike Score
Buena Vista Avenue (Sherman Street/ Park Street)	AM	Existing	3.7	D	0%	4.1	D	0%
		Plus Project	3.7	D		4.1	D	
	PM	Existing	3.8	D	1%	4.0	D	0%
		Plus Project	3.8	D		4.0	D	
Atlantic Avenue (Sherman Street/ Constitution Way)	AM	Existing	2.8	C	1%	2.6	B	1%
		Plus Project	2.9	C		2.6	B	
	PM	Existing	2.7	B	1%	2.7	B	2%
		Plus Project	2.8	C		2.8	C	
Webster Street (Buena Vista Avenue/ Atlantic Avenue)	AM	Existing	4.2	D	0%	3.7	D	0%
		Plus Project	4.2	D		3.7	D	
	PM	Existing	3.9	D	1%	4.2	D	0%
		Plus Project	3.9	D		4.2	D	
Park Street (Alameda Avenue/ Central Avenue)	AM	Existing	4.1	D	0%	3.9	D	1%
		Plus Project	4.1	D		4.0	D	
	PM	Existing	4.2	D	1%	4.2	D	0%
		Plus Project	4.2	D		4.2	D	
Clement Avenue (Park Street/ Broadway)	AM	Existing	3.7	D	0%	2.5	B	6%
		Plus Project	3.7	D		2.6	B	
	PM	Existing	2.1	B	10%	3.8	D	1%
		Plus Project	2.3	B		3.8	D	
Oak Street (Santa Clara Avenue/ Central Avenue)	AM	Existing	0.5	A	0%	0.5	A	0%
		Plus Project	0.5	A		0.5	A	
	PM	Existing	1.4	A	2%	1.6	A	1%
		Plus Project	1.4	A		1.6	A	
Constitution Way (Marina Village Parkway/ Atlantic Avenue)	AM	Existing	3.8	D	0%	3.2	C	0%
		Plus Project	3.8	D		3.2	C	
	PM	Existing	3.7	D	1%	4.1	D	0%
		Plus Project	3.7	D		4.1	D	

SOURCE: Abrams Associates, 2016.

**TABLE 4.G-13
EXISTING AND EXISTING PLUS PROJECT TRANSIT LEVEL OF SERVICE (LOS)**

Segment	Peak Hour	Scenario	Northbound / Westbound			Southbound / Eastbound		
			Travel Speed (MPH)	LOS	% Change in Travel Speed	Travel Speed (MPH)	LOS	% Change in Travel Speed
Webster Street (Webster Tube to Central Avenue)	AM	Cumulative	10.2	D	0%	14.4	C	1%
		Plus Project	10.2	D		14.3	C	
	PM	Cumulative	10.3	D	0%	14.4	C	1%
		Plus Project	10.3	D		14.3	C	
Park Street (Blanding Avenue to Otis Drive)	AM	Cumulative	9.5	D	1%	11.2	D	0%
		Plus Project	9.4	D		11.2	D	
	PM	Cumulative	6.6	F	2%	9.0	D	1%
		Plus Project	6.5	F		9.0	E	
Buena Vista Avenue (Sherman Street to Park Street)	AM	Cumulative	23.1	C	0%	23.9	C	1%
		Plus Project	23.0	C		23.7	C	
	PM	Cumulative	22.6	C	2%	23.7	C	2%
		Plus Project	22.2	C		23.3	C	
Santa Clara Avenue (Broadway to Oak Street)	AM	Cumulative	14.4	C	0%	12.7	D	2%
		Plus Project	14.4	C		12.5	D	
	PM	Cumulative	13.5	C	1%	12.5	D	2%
		Plus Project	13.4	C		12.3	D	

SOURCE: Abrams Associates, 2017.

Impact 4.G-6: The proposed project would not substantially increase traffic volumes on area freeways. (Less than Significant)

Development of the proposed project would increase the total traffic during both a.m. and p.m. peak hours. However, the proposed project is consistent with the City's General Plan and Plan Bay Area; cumulative buildout traffic forecasts of the Northern Waterfront area were used in the regional transportation plan as part of Plan Bay Area. Therefore the proposed project would have a less-than-significant impact to freeway operations. The findings of the project-specific transportation analysis found that although the proposed project would include changes to the GPA EIR in the form of changes to the project, it would generate fewer vehicle trips than forecast in the GPA EIR.

Mitigation: None required.

Impact 4.G-7: The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than Significant)

The proposed project would have two access connections onto Clement Avenue, the primary entrance to the residential area being signalized, the secondary entrance to the west, unsignalized. Clement Avenue would be extended from its current terminus at Nautilus Street westward to Entrance Road as part of the approved Marina Cove II project. The project site plan and circulation would be subject to final review and approval by the City of Alameda to ensure proposed improvements do not include potentially hazardous design features. The physical and traffic characteristics of area roadways (e.g., traffic signals, pedestrian sidewalks, and bicycle routes) would safely accommodate project-generated traffic, as area roadways are built to engineering standards. The proposed project's effect on traffic safety would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Impact 4.G-8: The proposed project would not result in inadequate emergency access. (Less than Significant)

Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The land use plan for the proposed project would have a primary signalized entrance on Clement Avenue as well as another secondary unsignalized entrance to the west on Clement Avenue. All lane widths within the project would meet the minimum width that can accommodate an emergency vehicle; therefore, the width of the internal roadways would be adequate. Therefore, the development of the proposed project is expected to have less-than-significant impacts regarding emergency vehicle access.

Mitigation: None required.

Impact 4.G-9: Development facilitated by the proposed project could potentially be inconsistent with adopted policies, plans, and programs supporting alternative transportation. (Less than Significant)

The City of Alameda's multi-modal approach to transportation analysis, presented throughout this analysis of transportation impacts, ensures that the City's priorities with respect to modes other than cars, including pedestrians, bicycles, and transit, are adequately supported. The proposed project would be consistent with the General Plan Transportation Element, including Policy 4.2.4.a, which states, "Encourage development patterns and land uses that promote the use of alternate modes and reduce the rate of growth in region-wide vehicle miles traveled";

Policy 4.2.4.b, which states “Integrate planning for Environmentally Friendly Modes, including transit, bicycling and walking, into the City's development review process”; and Policy 4.2.4.c, which states, “Encourage mixed use development that utilizes non-single occupancy vehicle transportation modes.” Additionally, the City will develop and implement a comprehensive Transportation Demand Management Program for the project site.

Accordingly, the proposed project would have a less-than-significant impact with respect to policies, plans, and programs supporting alternative transportation.

Mitigation: None required.

Project Construction Analysis

Impact 4.G-10: The proposed project would generate temporary increases in traffic volumes on area roadways during construction. (Less than Significant)

Project construction activities would generate off-site traffic that would include the initial delivery of construction vehicles and equipment to the project site, the daily arrival and departure of construction workers, and the delivery of materials throughout the construction period and removal of construction debris. Deliveries would include shipments of concrete, lumber, and other building materials for on-site structures, utilities (e.g., plumbing equipment and electrical supplies), and paving and landscaping materials.

Construction-generated traffic would be temporary and therefore would not result in any long-term degradation in operating conditions on roadways in the project site vicinity. The impact of construction-related traffic would be a temporary and intermittent lessening of the capacities of streets in the project site vicinity because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. Most construction traffic would be dispersed throughout the day. In addition, prior to issuance of grading and building permits, the project applicant would be required to submit a Traffic Control Plan.

The weekday work is expected to begin around 7:00 AM and end around 4:00 PM. The construction worker arrival peak would occur between 6:30 AM and 7:00 AM, and the departure peak would occur between 4:00 PM and 4:30 PM. Those peak hours are slightly before the citywide commute peak hours, and the number of trips generated during construction would not only be temporary, but would also be substantially less than the proposed project at buildout.

The requirements within the Traffic Control Plan would include, but not limited to, the following: truck drivers would be notified of and required to use the most direct route between the site and the freeway, as determined by the City Engineering Department; all site ingress and egress would occur only at the main driveways to the project site and construction activities may require installation of temporary (or ultimate) traffic signals as determined by the City Engineer; specifically designated travel routes for large vehicles would be monitored and controlled by flaggers for large construction vehicle ingress and egress; parking for construction workers would

be provided on the project site; and warning signs indicating frequent truck entry and exit would be posted on adjacent roads.

Because of the temporary nature of construction-period impacts, and the City-required Traffic Control Plan, project construction impacts are considered less than significant.

Cumulative Analysis

Impact 4.G-11: The proposed project would result in cumulative transportation impact to intersection levels of service. (Significant and Unavoidable with Mitigation)

Cumulative (2035) traffic operating conditions, and the project's contribution to those cumulative conditions, were analyzed above. As described above, a number of mitigations are recommended, but these mitigations would not lessen the impact to a level of insignificance. No additional mitigations are recommended to lessen cumulative impacts.

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H. Utilities and Service Systems

H.1 Introduction

This section discusses existing utilities and service systems that serve the project site, which include water service (potable and fire protection), wastewater collection and treatment, stormwater and drainage, solid waste collection and disposal, energy (electricity and natural gas), and telecommunications, and the potential impacts of the project to those utilities.

H.2 Environmental Setting

Potable Water Supply

Water service in Alameda is provided by the East Bay Municipal Utility District (EBMUD). EBMUD supplies water to approximately 1.3 million people in a service area that includes 20 cities and communities in Contra Costa and Alameda counties. About 90 percent of the EBMUD water supply originates from the Mokelumne River on the west slope of the Sierra Nevada and is stored at the Pardee Reservoir about 40 miles northeast of Stockton.

Raw water is treated at EBMUD's Orinda filter plant and conveyed to Alameda via pipeline. EBMUD owns and operates a 24-inch water transmission line that crosses the Oakland/Alameda Estuary near the Webster/Posey Tubes. This facility supplies water to the majority of the west end of Alameda. There is an existing 10-inch diameter pipeline within Main Street, north of Ralph Appezato Memorial Parkway, and 12-inch and 16-inch diameter pipelines within Main Street to the south between Ralph Appezato Memorial Parkway and Pacific Avenue (City of Alameda, 2013).

A 12-inch pipeline in Buena Vista Avenue, an 8-inch pipeline in Sherman Street, and an 8-inch pipeline in Clement Avenue to the east are located in the project vicinity. All of these lines are owned by EBMUD. There are also existing private water pipelines that extend from the EBMUD distribution system to the existing structures within the project site. The project site currently receives its water from a few water pipelines located in Entrance Road and along the northern side of the Del Monte Warehouse; these pipelines range in size between six to 15 inches.

Wastewater

Existing Collection System

An existing private 6-inch pipeline is located along the western side of the project site, and historically collected wastewater from container ships utilizing the project site's docks. Wastewater currently generated from the project site is collected and conveyed by an existing privately owned 10-inch pipeline that runs east to west along the southern side of the project site, towards Sherman Street and is aligned along the northern side of the Del Monte Warehouse. At the Sherman Street and Eagle Avenue intersection, this 10-inch pipeline connects with the City's wastewater collection system. The City's pipelines within Sherman Street range in size from eight to 12 inches and flow

from north to south. The 10-inch pipeline in Sherman Street connects with the EBMUD 60-inch interceptor pipeline at the intersection with Buena Vista Avenue (CBG, 2013b).

A Sanitary Sewer Study conducted in July 2003 by Bellecci & Associates evaluated the condition of the existing 10-inch pipeline. The study identified numerous areas of deterioration within the existing pipe network and large amounts of infiltration occurring, which is common for aged utility systems below groundwater. This study concluded that use of the existing 10-inch pipeline was infeasible due to its deteriorated physical condition. In 2010, EBMUD cleaned out sediment that had accumulated in the interceptor mains, which has increased the capacity of the interceptor to 16.3 mgd at the Buena Vista Avenue and Sherman Street intersection.

Wastewater Treatment

EBMUD receives wastewater from seven East Bay wastewater collection agencies (referred to as the “Satellites”) with a total population of approximately 650,000 people located within an 88-square mile service area. Each Satellite, including the City of Alameda, owns and operates its own wastewater collection system, which delivers wastewater to EBMUD’s interceptor system. Wastewater from the City is then transferred to EBMUD’s Main Wastewater Treatment Plant (MWWTP), located at the foot of the San Francisco-Oakland Bay Bridge in the City of Oakland.

The MWWTP provides secondary treatment for a maximum flow of 168 million gallons per day (MGD), while primary treatment is provided for up to 320 MGD. On average, about 63 million gallons of wastewater is treated every day (EBMUD, 2016). The wastewater treatment plant is permitted by the Regional Water Quality Control Board (RWQCB) and effluent from the plant is regularly monitored to ensure that water quality standards are not violated. There have been no violation of water quality standards by the treatment plant in recent years (January 1, 2010 through January 1, 2016), and there are no RWQCB enforcement actions pending against EBMUD (SWRCB, 2016).

EBMUD operates three wet weather facilities that handle excess sewage during storm events when flows exceed the capacity of EBMUD’s MWWTP. The excess flows are largely caused by stormwater and groundwater leaking into the region’s aging sanitary sewer collection pipelines and through improper connections that allow stormwater to flow into the sewer system (infiltration and inflow, or “I & I”). These storage basins provide plant capacity for a short-term hydraulic peak of up to 415 MGD during wet weather events. When the wet weather flow capacity is exceeded, untreated sewage discharges from the wet weather facilities get discharged to the San Francisco Bay.

In January 2009, EBMUD entered into a Stipulated Order for Preliminary Relief (Stipulated Order) from the U.S. Environmental Protection Agency (EPA), State Water Resources Control Board (SWRCB) and the San Francisco Bay Regional Water Quality Control Board (RWQCB). This Stipulated Order contains the measures that EBMUD is required to implement in order to address discharges of inadequately treated sewage to San Francisco Bay during wet weather conditions. The intent of the Stipulated Order is to formulate long-term solutions to minimize the high level of infiltration to the East Bay collection systems and eliminate the discharge of the excess flows from EBMUD’s wet weather facilities by 2036.

In March 2011, the Satellites (including the City of Alameda) entered into a Stipulated Order with the EPA, SWRCB and the RWQCB. This Stipulated Order obligates Satellites to improve management of their wastewater collection systems, to address sanitary sewer overflows, and to reduce inflow and infiltration (I&I) in their collection systems. The Stipulated Order required that the City of Alameda cooperate with EBMUD in the development of a regional flow monitoring/data assessment program, implement an inflow identification and reduction plan to identify and reduce sources of direct water inflow, develop a pump station renovation plan, develop a sewer cleaning and root control plan, and report annually on progress to EPA.

Stormwater

Alameda is one of several cities in the Bay Area that is responsible for controlling stormwater pollution by complying with the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) permit issued by the San Francisco Bay Regional Water Quality Control Board. The City implements the Municipal Regional Stormwater NPDES permit requirements with all other Alameda County local agencies as a co-permittee in the Alameda County Clean Water Program. This permit (No. CAS612008) requires the City to prevent the discharge of non-stormwater (materials other than rain water) from entering the municipal storm drain system and San Francisco Bay, including the Oakland Inner Harbor (City of Alameda, 2013).

The City of Alameda's Department of Public Works oversees and maintains the storm drainage system throughout the city limits. The City has a Storm Drain/Urban Runoff Project Administration program that provides management and maintenance of the City's storm drainage system, including lagoons, in accordance with the City's NPDES permit requirements.

Recycled Water

There is no existing source of recycled water in the project vicinity. Accordingly, there are no existing recycled water distribution facilities within the project site.

Solid Waste

The City of Alameda delivers its solid waste to the Davis Street Resource Recovery Complex located in San Leandro, where it is sorted and recyclable materials are recovered. Residual solid waste is disposed at the Altamont Landfill, which accepts the following types of waste: ash, construction/demolition, contaminated soil, green materials, industrial, mixed municipal, other designated waste, tires, shreds. This landfill has an estimated permitted capacity of 62 million cubic yards, a daily permitted capacity of 11,500 tons per day (CalRecycle, 0216a), and an estimated remaining capacity of 47.2 million cubic yards as of 2012 (ACEHD, 2013). The City has a diversion rate of 72 percent (as of 2011), which is above Assembly Bill 939 diversion goals (Stopwaste.Org, 2013). Measure D (the Alameda County Source Reduction and Recycling Initiative Charter Amendment), requires the County to divert 75 percent of solid waste from the landfill by 2010.

H.3 Regulatory Setting

This section briefly describes state and local plans and policies related to the adequate provision and protection of utilities.

State

Senate Bill 610

Senate Bill (SB) 610, codified as Sections 10910-10915 of the California Water Code, requires the preparation of a Water Supply Assessment (WSA) for large-scale development projects proposing over 500 housing units, 250,000 square feet of commercial office space (or more than 1,000 employees), a shopping center or business establishment with over 500,000 square feet (or more than 1,000 employees), or equivalent usage. The WSA report evaluates the water supply available for new development based on the anticipated demand. For the broad range of projects that are subject to this law, the WSA must be requested by the lead agency from the local water provider, in this case EBMUD, at the time the lead agency determines whether an EIR is required for the project. The water agency must then provide the assessment within 90 days, but may request a time extension under certain circumstances. The water supply assessment must include specific information including an identification of existing water supply entitlements and contracts. The governing board of the water agency must approve the assessment at a public meeting.

California Integrated Waste Management Act of 1989 and SB 1016

The California Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans and also mandated that local jurisdictions divert at least 50 percent of all solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. In 2006, SB 1016 updated the requirements. The new per capita disposal and goal measurement system moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a factor, along with evaluating program implementation efforts. These two factors will help determine each jurisdiction's progress toward achieving its Integrated Waste Management Act (AB 939) diversion goals. As of 2011, the Alameda's diversion rate was 72 percent, which is above AB 939's 50 percent diversion requirement (StopWaste.Org, 2013). As of 2007 and with the passage of SB 1016, the 50 percent diversion requirement is now measured in terms of per-capita disposal.

In addition to the requirements of AB 939, Alameda County adopted the Alameda County Waste Reduction and Recycling Initiative Charter Amendment (Measure D) in November 1989. Under this charter amendment, the County is required to divert 75 percent of solid waste from landfills by the year 2010.

California Code of Regulations Title 24

The State of California regulates energy consumption under Title 24 of the California Code of Regulations. The Title 24 Building Energy Efficiency Standards were developed by the California Energy Commission (CEC) and apply to energy consumed for heating, cooling,

ventilation, water heating and lighting in new residential and non-residential buildings. The CEC updates these standards periodically, and adopted the latest standards in January 2017. These standards establish lighting zones that differentiate the amount of outdoor lighting by geographical location, and establish new performance standards for residential lighting.

Urban Water Management Planning Act

The project site is within the EBMUD water service area. EBMUD's Urban Water Management Plan (UWMP) 2016 provides an overview of the District's water supply sources and usage, recycled water and conservation programs, and projected water demands. The UWMP must be updated every five years pursuant to California's Urban Water Management Planning Act.

California's Model Water Efficient Landscape Ordinance

In 2004, AB 2717 was passed, it requested the California Urban Water Conservation Council (CUWCC) to convene a stakeholder task force, composed of public and private agencies, to evaluate and recommend proposals by December 31, 2005, for improving the efficiency of water use in new and existing urban irrigated landscapes in California. Based on this charge, the Task Force adopted a comprehensive set of 43 recommendations, essentially making changes to AB 325 of 1990 and updating the Model Local Water Efficient Landscape Ordinance. The recommendation of the bill charges the California Department of Water Resources (DWR) to update the Model Efficient Landscape Ordinance and to upgrade California Irrigation Management Information System (CIMIS).

The Water Conservation in Landscaping Act of 2006 (AB 1881) enacts many, but not all of the recommendations reported to the Governor and Legislature in December 2005 by the CUWCC Landscape Task Force (Task Force). AB 1881 requires DWR, not later than January 1, 2009, by regulation, to update the model ordinance in accordance with specified requirements, reflecting the provisions of AB 2717. AB 1881 requires local agencies, not later January 1, 2010, to adopt the updated model ordinance or equivalent or it will be automatically adopted by statute. Also, the bill requires the Energy Commission, in consultation with the department, to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Local Plans and Policies

EBMUD Regional Private Sewer Lateral Ordinance

In 2009, the United States Environmental Protection Agency (EPA) and the California Regional Water Quality Control Board ordered EBMUD to fix old, cracked sanitary sewer pipes. The EPA's mandate compelled EBMUD and its partners to phase in a Regional Private Sewer Lateral Ordinance beginning in 2011. The ordinance requires affected property owners to obtain a certificate from EBMUD certifying that all of their sewer laterals are leak-free, or that the necessary repairs or replacements have been made.

Alameda County Clean Water Program

Construction activities associated with the proposed project would be subject to the National Pollutant Discharge Elimination System (NPDES) permit requirements for stormwater management and discharges. The Alameda County Clean Water Program (ACCWP) NPDES permit incorporates updated state and federal requirements related to the quantity and quality of post-construction stormwater discharges from new development and redevelopment projects. The stormwater system at the project site would be regulated under the NPDES permit. In particular, Provision C.3 in the NPDES Permit governs storm drain systems and regulates post-construction stormwater runoff. The provision requires new development and redevelopment projects to incorporate treatment measures and other appropriate source control and site design features to reduce the pollutant load in stormwater discharges and to manage runoff flows. “Redevelopment” is defined as a project on a previously developed site that results in the addition or replacement of impervious surface. A redevelopment project that adds or replaces at least 10,000 square feet of impervious surface is required to adhere to the C.3 provisions. The proposed project would replace more than 5,000 square feet of impervious surface; therefore it would be required to incorporate treatment measures and appropriate source control and site design measures under the NPDES permit.

City of Alameda General Plan

Policies from the City’s 1991 General Plan that relate to utilities are listed below.

Open Space for the Preservation of Natural Resources

- Policy 5.1.h** Continue to support EBMUD in its efforts to promote and implement water conservation measures.
- Policy 5.1.i** Encourage the use of drought-resistant landscaping.
- Policy 5.1.y** Work with EBMUD to implement the Alameda Reclamation Project.
- Policy 5.1.z** Develop a comprehensive City Water Conservation Ordinance that recognizes Alameda’s unique climate, soil conditions, and development patterns.
- Policy 5.1.aa** Review proposed development projects for both water and energy efficiency, and integrate plans for the use of reclaimed wastewater for landscaping as a condition of approval.

Waste Management

- Policy 8.4.d** Continue to support the resource recovery measures specified in the Alameda County “Solid Waste Management Plan,” July 1987.
- Policy 8.4.j** Implement the recently approved residential area curbside recycling program.
- Policy 8.4.k** Design and implement a recycling program for commercial and industrial businesses, including paper product recycling strategies for business parks.

Northern Waterfront General Plan Amendment

- Policy 10.6.x** Phase development in accordance with transportation and infrastructure improvements necessary to serve the new development.

Policy 10.6.y If necessary, require new storm drain facilities to meet current and future demand and minimize potential flooding impacts on adjacent properties.

Policy E-T 15 The Encinal Terminals development should fund a fair share of the costs to upgrade storm sewer and wastewater facilities necessary to serve all future development within the Northern Waterfront area.

Alameda Municipal Code

In an effort to meet the state's AB 939 waste reduction mandate, the City's Municipal Code requires that projects valued at \$100,000 or more submit a Waste Management Plan (WMP) (see Chapter XXI, Article VI., Subsections 21-24.IA of the Municipal Code) to divert at least 50 percent of all construction and demolition debris.

In addition, in order to increase the diversion rate and facilitate compliance with AB 939 as well as Alameda County's Measure D (the Alameda County Source Reduction and Recycling Initiative Charter Amendment, described above), the City Municipal Code requires all persons receiving solid waste collection to separate recyclable and organic materials for collection.

City of Alameda Sewer Lateral Ordinance

Under the City's sewer lateral ordinance (No. 3048), private property owners are required to fix old, cracked sanitary sewer pipes to ensure they do not allow the infiltration of rainwater, to reduce the overwhelming of wastewater treatment facilities.

City of Alameda Bay-Friendly Landscaping Program

Consistent with the state of California's Water Efficiency Landscape ordinance, the City of Alameda amended the Alameda Municipal Code by adding Section 30-60, Bay-Friendly Landscaping Requirements for new City landscaping projects, renovation projects, and public-private partnership projects. This ordinance requires both public and private-sector projects that include new construction and renovation of landscapes of 2,500 square feet of irrigated area or greater to obtain a permit. Applicants are required to meet nine practices of the County's Bay-Friendly basics checklist which include mulching, amending the soil with compost prior to planting, reduction and recycling of landscape construction waste, planting drought tolerant and California native plants, and weather-based irrigation controllers (Stopwaste.Org, 2011).

City of Alameda Zero Waste Implementation Plan

The City of Alameda has developed a draft citywide integrated waste management plan in an effort to identify the policies, programs, and facilities that will be needed to achieve zero waste. The draft plan requires preparation of a project-specific waste management plan as part of the demolition or building permits for development.

City of Alameda's Water Efficient Landscaping Ordinance

The City of Alameda's Water Efficient Landscaping Ordinance (Alameda Municipal Code Chapter 30, Article IV, Sections 30-58 through 30-59) implements Assembly Bill 325,

California's Model Water Efficient Landscape Ordinance (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490-495).

H.4 Impacts and Mitigation Measures

Significance Criteria

Consistent with CEQA Guidelines Appendix G (Environmental Checklist) the project could have a significant impact if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;
- Not comply with federal, state, and local statutes and regulations related to solid waste.

Approach to Analysis

This impact discussion assesses the project's potential impact on utilities and service systems, describes adverse impacts that would result from implementation and projected buildout, and recommends mitigation measures as appropriate.

A Water Supply Assessment (WSA) was completed for the project that determined the estimated demand for the proposed project. EBMUD determined that enough supply would be available to meet the demands of the project, and approved the WSA on April 22, 2014. The WSA assumed a smaller development scenario than what is currently being proposed for the project. On May 27, 2016 EBMUD submitted a letter in response to the Notice of Preparation of this Draft EIR stating that the increase in demand associated with the proposed project would be minor and would not result in changes to the conclusions contained in the WSA, and that a second WSA would not be required for the proposed project (EBMUD, 2016). The letter also provided information regarding EBMUD's ability to accommodate the wastewater flows of the proposed project.

For other utility systems, the projected utility demands, or net increases in utility usage associated with implementation of the project, were determined and compared to existing capacity. The

section addresses potential impacts related to the construction of new water, wastewater, and storm water drainage facilities. In addition, this section evaluates the potential for the project to result in temporary adverse impacts on landfill capacity due to the disposal of project-generated demolition debris and construction waste as well as operational impacts on landfill capacity once project construction is completed. The largest potential source of solid waste would be demolished concrete and excavated soil.

Northern Waterfront GPA EIR

The Northern Waterfront GPA EIR concluded that less-than-significant impacts on utilities or impacts that could be reduced to less-than-significant with mitigation would result from buildout of the proposed Northern Waterfront GPA. The GPA EIR indicated that continued use of substandard storm sewer or sanitary sewer on-site utility lines could contribute to peak wastewater or storm water flows that could exceed the capacity of the existing sewage or storm drain facilities. Implementation of **Mitigation Measure UTIL-1**, which required project sponsors to remove or reconstruct all existing sewer and storm drain laterals serving the project site would reduce such impacts to less-than-significant levels.

There are no substantial changes in the proposed project or new information of substantial importance since the GPA EIR that would result in any new significant environmental effects or substantial increase in the severity of previously identified significant effects related to utilities and service systems. As described below, the proposed project would have less than significant impacts to utilities and service systems, which is consistent with the GPA EIR. Therefore, the proposed project would not result in any new potentially significant utilities and service systems effects that were not identified in the GPA EIR or a substantial increase in the severity of any previously identified significant utilities and service systems effects.

Impacts and Mitigation Measures

Impact 4.H-1: The proposed project would not result in an exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board. (Less than Significant)

Wastewater flows from the proposed project would consist of typical residential and commercial sewage. Approximately 0.32 mgd of wastewater would be generated by the proposed project (CBG, 2016). EBMUD confirmed that the MWWTP would have adequate dry weather capacity to accommodate the proposed project (EBMUD, 2016). Wastewater generated by the project would not contain any unusual pollutants that would otherwise result in such an exceedance.

As discussed in the Environmental Setting above, EBMUD entered into a Stipulated Order from the EPA, SWRCB, and San Francisco RWQCB, which contains measures that EBMUD is required to implement in order to address inadequately treated sewage to San Francisco Bay during wet weather conditions (City of Alameda, 2013). Subsequently, in March 2011, the East Bay wastewater collection agencies, including the City of Alameda, entered into a Stipulated Order with the EPA, SWRCB, and the RWQCB. This particular Stipulated Order obligates the

collection agencies to improve management of their wastewater collection systems, to address sanitary sewer overflows, and to reduce inflow and infiltration (I&I) in their collection systems.

Consistent with the Stipulated Order and the City of Alameda's Private Lateral Ordinance, the proposed project would construct new wastewater infrastructure to connect to the EBMUD interceptor in Buena Vista Avenue and an on-site sewer collection system would be installed throughout the proposed street network within the project site (see discussion below for additional details). The new sewer collection system would greatly reduce I&I flows entering the system in wet weather conditions and thereby reduce wet weather flows to the MWWTP. Such improvements are expected to further ensure that the project does not contribute to exceedances of RWQCB treatment standards for water discharged to the Bay; therefore, this impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Impact 4.H-2: The proposed project would not have wastewater service demands that would result in a determination by the service provider that it does not have adequate capacity to serve projected demand, necessitating the construction of new or expanded wastewater treatment facilities. (Less than Significant with Mitigation)

As described above, the project's 589 new residential units and 30,000 to 50,000 square feet of commercial/office uses and restaurant uses would generate approximately 0.32 mgd of sewage (CBG, 2016). With a current average dry weather flow of approximately 54 mgd and excess dry weather flow capacity of 66 mgd (CBG, 2013a) at EBMUD's MWWTP, EBMUD has adequate dry weather capacity at the MWWTP for the projected wastewater flows. However, EBMUD indicated that capacity for the project's wet weather flows was of concern.

As part of EBMUD's Stipulated Order, the City is working with EBMUD to reduce the amount of I&I entering the wastewater collection system (City of Alameda, 2013). Given the deteriorated condition of the existing 10-inch pipeline, the proposed project includes construction of a new 10-inch sewer pipeline that would connect to the EBMUD interceptor in Buena Vista Avenue. Currently, two wastewater infrastructure options are being considered. The first option includes construction of a new 10-inch pipeline that extends from the project site westward to Sherman Street, connecting to the City's existing sewer collection system. The existing six or eight inch pipelines accepting flow from the project site would likely need to be upsized to provide the necessary capacity. The second option includes constructing a new sewer pipeline that flows southerly between the Del Monte and Chipman warehouse parcels in Entrance Road and directly connect to the EBMUD interceptor near the intersection of Buena Vista Avenue and Entrance Road. Under both scenarios, a new onsite sewer collection system would be installed throughout the proposed street network within the project site; pipeline size would range in size from six to eight inches. In addition, a pump/lift station would also be installed at the southern end of the

project site to minimize the depth of the proposed system. All new sanitary sewer lines would be designed and constructed to prevent I&I to the maximum extent feasible.

Mitigation Measure 4.H-2 below builds upon Mitigation Measure UTIL-1 from the GPA EIR and would ensure the project implements the necessary improvements to reduce I&I flow to the maximum extent feasible. Additionally, as described in Impact 4.M-3 below, the project would include installation of a new onsite storm drainage system consisting of new inlets and pipelines that would further reduce wet weather flows to the MWWTP. This measure would reduce the level of impact to less than significant.

Mitigation Measure 4.H-2: The project sponsors shall: 1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to ensure that such systems and lines are free from defects or, alternatively, disconnected from the sanitary sewer system; and 2) ensure any new wastewater collection systems, including new lateral lines, for the project are constructed to prevent infiltration and inflow (I&I) to the maximum extent feasible while meeting all requirements contained in the Regional Private Sewer Lateral Ordinance and applicable municipal codes or City ordinances.

Consistent with the Stipulated Order, such improvements would greatly reduce the system's infiltration and inflow. Since the MWWTP and the EBMUD interceptor are expected to have adequate capacity to serve projected new demand generated by the proposed project, the project would not require the construction of any new wastewater treatment facilities or the expansion of such facilities. Therefore, impacts on existing wastewater treatment facilities would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Impact 4.H-3: The proposed project would result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)

As part of the project, a new stormwater drainage system that facilitates infiltration and reduces stormwater runoff volumes compared to existing conditions would be installed. Project-related stormwater collection and drainage would maintain the existing patterns of the project site. Stormwater runoff from the project site would be directed to existing outfalls and the Arbor Street pump station. The proposed storm drain system improvements would include installation of new inlets and pipelines appropriately sized to convey the site run-off. Any portions of the storm drainage system that directly discharge to the Oakland Estuary would likely require improved outfall structures; the construction of which would require permits from various regulatory agencies such as the U.S. Army Corps of Engineers. Stormwater from the remainder of the project site would be collected and conveyed by a new system of inlets and pipelines that connect to the City's existing 54-inch pipeline along the southern end of the site and eventually discharged to the Arbor Street Pump Station.

Construction activities of the new storm water drainage facilities would include in-street trenching and excavation work. Such activities would be temporary and as described in Section 9, *Hydrology and Water Quality*, of the Initial Study (see **Appendix A**) the project would be required to comply with the requirements of the RWQCB concerning discharges of stormwater during project construction, and the project applicant would be required to obtain a NPDES permit for construction activities and execute a Stormwater Pollution Prevention Plan (SWPPP) that would outline construction stormwater quality management practices based on the CWPAC Stormwater Quality Management Plan. The SWPPP would describe erosion control measures similar to those recommended by the CWPAC which are designed to reduce the potential for pollutants to contact stormwater and eliminate or reduce discharge of materials to stormwater during on-land construction (see **Mitigation Measure HYD-1** in the Initial Study, located in **Appendix A** of this Draft SFEIR).

As further discussed in the Initial Study, in-water construction activities for improvements to the existing outfalls could require removal and disposal of potentially contaminated sediment, which could result in turbidity and other adverse water quality effects within the Oakland Estuary. In-water construction activities would be required to adhere to Sections 401 and 404 of the Clean Water Act and the future project applicant would also be required to obtain necessary permits and approvals from the U.S. Army Corps of Engineers, RWQCB and BCDC. Implementation of **Mitigation Measure HYD-2** (see the Initial Study, located in **Appendix A** of this Draft SFEIR) would ensure that in-water construction activities are conducted consistent with the Long-Term Management Strategy, a program developed by the above-described agencies.¹

The proposed project would be required to adhere to the C.3 provision in the NPDES by including specific site design features that minimize land features and impervious surfaces and implementation of Low Impact Development (LID) measures, which include bioretention areas to treat stormwater runoff from impervious areas on the project site prior to discharging into the stormwater system. These bio-treatment areas would be integrated in landscaping areas adjacent to parking areas or buildings. With implementation of LID measures and compliance with C.3 provisions, operation impacts of the new storm drainage system would be considered less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: No additional measures required.

¹ For a detailed discussion of impacts, mitigation measures, and permits regarding construction and operation of the proposed improvements to the project site's stormwater system, please refer to the Hydrology and Water Quality section of the Initial Study, contained in Appendix A of this Draft SFEIR.

Impact 4.H-4: The proposed project would have sufficient water supplies available to serve the development from existing entitlements and would not require the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)

Water Supply

EBMUD supplies approximately 220 mgd of potable water throughout its service area in non-drought years. According to EBMUD's 2010 Urban Water Management Plan (UWMP), EBMUD's water supply is adequate to meet existing and projected area-wide demand through 2030 under normal conditions and up to two years of drought. EBMUD implements numerous water conservation and recycling programs to reduce demand and develops projects to manage future water supply needs. The water demand projections used by EBMUD are derived from a land-use based demand forecast that reflects the City's plans and policies, and assumes an amount of future development permitted under the General Plan's growth management ordinance and additional growth.

The Water Supply Assessment (WSA) determined the estimated water demand for the proposed project. EBMUD determined that enough supply would be available to meet the demands of the project, and approved the WSA on April 22, 2014. The WSA assumed that the project would develop 505 dwelling units, 25,000 square feet of retail/commercial space, 400 marina slips, and 3.21 acres of open space, which would have a potable water demand of around 96,000 gallons per day (gpd). On May 27, 2016 EBMUD submitted a letter in response to the NOP for this Draft EIR stating that the proposed project, with 589 dwelling units, 50,000 square feet of retail/commercial space, 160 marina slips, and 3.21 acres of open space would have a demand of about 108,000 gpd, or an increase of around 13 percent. EBMUD determined that this increase was minor and would not result in changes to the conclusions contained in the WSA, and that a second WSA would not be required for the proposed project (EBMUD, 2016).

Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded services unless all applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense. The project would comply with the City of Alameda's Bay Friendly and Water Efficient Landscape Ordinance (Alameda Municipal Code Chapter 30, Article IV, Sections 30-58 through 30-59). In addition to compliance with the City of Alameda Water Efficient Landscaping Ordinance (Alameda Municipal Code Chapter 30, Article IV, Sections 30-58 through 30-59), the project sponsor may be required to implement additional water conservation programs and best management practices contained in EBMUD's Water Service Regulations and/or California's Model Water Efficient Landscape Ordinance (Assembly Bill 325).

For these reasons, the proposed project would be adequately served by the existing water supply and the impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Water Facilities

EBMUD provides potable water service to the City of Alameda and other communities within Contra Costa and Alameda Counties. EBMUD also owns and maintains the distribution pipeline facilities within public streets throughout its service area. There is a 12-inch pipeline in Buena Vista Avenue, an 8-inch pipeline in Sherman Street, an 8-inch pipeline in Entrance Road, and an 8-inch pipeline in Clement Avenue to the east, all of which are owned by EBMUD. There are also existing private water pipelines that extend from the EBMUD distribution system to the existing structures within the project site. The project site currently receives its water from a few water pipelines located in Entrance Road and along the northern side of the Del Monte Warehouse; these pipelines range in size between six to 15 inches.

EBMUD's long-range planning for future water infrastructure and supply needs is based on population projections compiled by ABAG, which takes into account growth planned in the adopted general plans of Bay Area cities and counties. Development of the project site with new homes has been planned for in the Alameda General Plan for the next 20 years, and therefore has been factored into EBMUD's water demand projections within the Water Supply Management Program 2040. The proposed project's incremental increase in demand would not be significant, and would not require the construction of new water treatment facilities or the expansion of such facilities. The 2014 EBMUD Water Supply Assessment and May 27, 2016 NOP response letter confirm the water supply for the project would be adequate.

As described in the Project Description, the project would include new water pipelines in Clement Avenue and Entrance Road to serve the project site. These facilities would be owned and maintained by EBMUD and likely range in size from eight to 12 inches. An onsite distribution system would extend from the pipeline in Clement Avenue and be constructed throughout the street network within the project site. These pipelines would range in size from six to eight inches. Construction of these pipelines could result in potentially significant environmental impacts but implementation of mitigation measures described throughout this SFEIR and Initial Study (i.e., construction mitigation measures related to air quality, noise, hydrology, and transportation) would reduce construction-related impacts to a less-than-significant level. This is the same finding as that found in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: No additional measures required.

Impact 4.H-5: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate solid waste generated by the project, and would comply with federal, state, and local statutes and regulations related to solid waste. (Less than Significant)

Construction Impacts

Solid waste generated by buildout of the proposed project (from building demolition and generation of construction debris) would largely consist of the existing vacant warehouses and

other buildings. Some of the buildings contain large-scale roof timbers, roof decking, wall-framing timbers, wood or metal siding, interior wall partitions, and concrete slab floors, as well as other systems (e.g., plumbing, fire suppression). When structures are “deconstructed,” rather than demolished, wood and fixtures could be retained for resale or other reuse rather than disposed, and the majority of such materials can be diverted from the waste stream (City of Alameda, 2002). Deconstructed materials can be diverted from landfills to recycling and reuse markets. Solid waste generated from demolition of existing utility systems would also require disposal. Because the portions of existing utility systems within development areas may either be abandoned in place or removed and disposed, the amount of solid waste generated from demolition of existing utility systems is unknown at this time.

In addition, the project would be required to comply with Chapter XXI, Section 21 of the City of Alameda Municipal Code, which requires that new developments submit plans for managing construction debris to promote separation of waste types and recycling. These plans would need to be prepared in coordination with City staff, the project sponsor(s), and demolition subcontractors, and must be approved by City staff prior to issuance of a demolition permit. Compliance with the City’s Municipal Code regarding management of construction debris, project construction would result in less-than-significant impacts on landfill capacity.

Operation Impacts

CalRecycle reports numerous solid waste generation rates developed by a variety of jurisdictions throughout the State, ranging from four pounds per dwelling unit per day (lb/unit/day) to 8.6 pounds per dwelling unit per day (lb/household/day) for multifamily residential development (CalRecycle, 2016b). Based on the highest of these solid waste generation rates (i.e., 8.6 lb/household/day), the proposed project’s up to 589 new housing units would generate approximately 5,065 pounds per day (or 2.5 tons per day). CalRecycle also reports solid waste generation rates developed by jurisdictions for commercial uses. For the purposes of this analysis, a rate of five lb/thousand square feet/day was used for commercial uses (CalRecycle, 2016c) resulting in the generation of approximately 250,000 lb/day (125 tons/day). As of 2012, the Altamont Landfill (which serves Alameda) had an estimated remaining capacity of 47.2 million cubic yards and a permitted daily capacity of 11,500 tons/day. The project would represent an incremental increase in current waste disposal at the Altamont Landfill. Given the City’s existing diversion rate and Measure D, the solid waste generated by operation of the project could be expected to be less than this worst-case estimate. Although the Altamont Landfill has an estimated closure date of 2025 (CalRecycle, 2016a), it has an estimated disposal capacity through 2045 (Waste Management, 2013). With nearly 30 years of remaining capacity at the landfill, solid waste generated by the project in the long-term would not substantially reduce existing landfill capacity. Therefore, operation of the project would represent a less-than-significant impact on solid waste disposal. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Regulatory

The proposed project would not conflict with or interfere with the City's ability to implement its adopted solid waste management programs and policies, including the Citywide integrated waste management plan and Chapter XXI, Section 21 of the City of Alameda Municipal Code, or Alameda County's Measure D. The project would be served by weekly curbside pickup of recyclable materials by ACI. Waste generated by the proposed project would enter the same stream as other area waste collected by ACI, and would be subject to the same existing requirements regarding recycling and solid waste disposal. Because existing solid waste collection and disposal in Alameda complies with current federal, State and local requirements, and because the project's solid waste would enter the same existing disposal stream, the proposed project would not violate any federal, State, or local statutes or regulations related to solid waste. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Mitigation: None required.

Cumulative Impacts

Impact 4.H-6: The proposed project, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in cumulatively considerable impacts to utilities and service systems. (Less than Significant)

The geographic setting for cumulative impacts to utilities and service systems is the service area of each respective utility service agency. Past and present projects are described in the *Environmental Setting*, which represents the baseline conditions for the evaluation of cumulative impacts. Reasonably foreseeable future development forecasts are based on projections of future growth and take into account projects going through the entitlement process. Those forecasts account for other major projects currently in various stages of the approval and construction process. The proposed project, in combination with other past, present, and future projects in the City of Alameda, would result in an increase in demand for public services for an estimated 95,500 residents that would be living in Alameda by 2040 (ABAG and MTC, 2013).

Wastewater

As discussed under Impact 4.H-1 and 4.H-2 above, wastewater flows from the proposed project would consist of typical residential and commercial sewage, resulting in approximately 0.32 mgd of wastewater that would be treated by EBMUD. EBMUD confirmed that the MWWTP would have adequate dry weather capacity to accommodate the proposed project, but that wet weather flows could present a concern. Under the Stipulated Order EBMUD is required to implement several measures in order to address inadequately treated sewage to San Francisco Bay during wet weather conditions (City of Alameda, 2013), and subsequently EBMUD's Satellite Agencies entered into a Stipulated Order that obligates them to improve management of their wastewater collection systems, to address sanitary sewer overflows, and to reduce inflow and infiltration (I&I) in their collection systems. To support these efforts, the proposed project would implement

Mitigation Measure 4.H-2 by replacing or rehabilitating the wastewater infrastructure that serves the site, and complying with EBMUD's Regional Private Sewer Lateral Ordinance. The physical effects of these improvements are described throughout this SFEIR, and mitigation is provided to reduce these impacts to less than significant, where feasible.

All present and future projects that are subject to discretionary approval would be required to undergo project-specific environmental analysis, pursuant to the CEQA, to determine the potential for environmental impacts and identify mitigation where feasible. Like the proposed project, all past, present, and future projects have been and would be required to comply with the Regional Private Sewer Lateral Ordinance by replacing or rehabilitating existing sewer lines, or installing new lines, to serve the proposed development. These projects would also be required to ensure adequate capacity is available to accommodate new wastewater that is generated by the proposed development. Therefore, the proposed project, in conjunction with other development, would not have a significant cumulative impact associated with wastewater, and the project's cumulative impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Water Supply Availability and Water Treatment

As discussed under Impact 4.H-3, EBMUD indicated that there is adequate water available to serve the project, and no new facilities would need to be constructed. All present and future projects that are subject to discretionary approval would be required to undergo project-specific environmental analysis, pursuant to CEQA, to determine the potential for environmental impacts and identify mitigation where feasible. Like the proposed project, all past, present, and future projects have been and would be required to comply with the City of Alameda Municipal Code, including the Water Efficient Landscaping Ordinance. These projects would also be required to ensure adequate water supply is available to serve the proposed development. Therefore, the proposed project, in conjunction with other development, would not have a significant cumulative impact associated with water, and the project's cumulative impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Stormwater

As part of the project, a new stormwater drainage system that facilitates infiltration and reduces stormwater runoff volumes compared to existing conditions would be installed. The proposed project would also install new inlets and pipelines appropriately sized to convey the site run-off, and may be required to improve any outfall structures that directly discharge runoff from the project site to the Oakland Estuary. The physical effects of these improvements are described throughout this SFEIR, and mitigation is provided to reduce these impacts to less than significant, where feasible.

All present and future projects that are subject to discretionary approval would be required to undergo project-specific environmental analysis, pursuant to CEQA, to determine the potential

for environmental impacts and identify mitigation where feasible. Like the proposed project, past, present, and future developments over one acre in size have been or would be required to comply with the requirements of the RWQCB concerning discharges of stormwater during project construction, through obtaining a NPDES permit for construction activities and executing a Stormwater Pollution Prevention Plan (SWPPP) that would outline construction stormwater quality best management practices designed to reduce the potential for pollutants to contact stormwater and eliminate or reduce discharge of materials to the City's stormwater system. Therefore, the proposed project, in conjunction with other development, would not have a significant cumulative impact associated with stormwater, and the project's cumulative impact would be less than significant. This is the same finding as the proposed project in the GPA EIR, and the effects of the proposed project would not increase the severity of previously identified significant effects or introduce a new significant environmental effect.

Landfill Capacity

Solid waste generated in Alameda is sent to the Altamont Landfill. As of 2012, the Altamont Landfill (which serves Alameda) had an estimated remaining capacity of 47.2 million cubic yards and a permitted daily capacity of 11,500 tons/day. Past, present, and reasonably foreseeable future development includes existing development, and the projects listed in Table 4-1, *Cumulative Projects*.

All present and future projects that are subject to discretionary approval would be required to undergo project-specific environmental analysis, pursuant to CEQA, to determine the potential for environmental impacts and identify mitigation where feasible. Many past and all present and reasonably foreseeable future development projects have or would generate construction and operational solid waste and, depending on the volumes and end uses, have been or would be required to implement recycling and waste reduction measures. The proposed project would generate a minor amount of construction and demolition waste, mostly attributed to the removal of the metal structures onsite and a portion of the existing wharf. The proposed project would divert a minimum of 50 percent of its construction waste for recycling or reuse and would comply with the requirements of CALGreen and AB 939. Operation of the proposed project would generate an estimated 255,000 lb/day (125 tons/day), representing an incremental increase in waste being sent to the Altamont landfill, and the landfill would have adequate capacity to serve the proposed project. Assuming the residents and businesses on the project site have similar waste generation rates to the rest of Alameda, operational waste generated by the project would not cause the City to exceed their target waste diversion rates. The project would not exceed permitted landfill capacity or violate any state or federal regulations related to solid waste and the proposed project would have a less-than-significant impact on solid waste generation. All past, present, and foreseeable future projects have been and would be required to demonstrate that adequate landfill capacity is available to accommodate increased waste prior to any project approvals. Such projects have been and would also be required to comply with the recycling and reuse measures and targets established by CALGreen and AB 939 for construction and operational waste. Therefore, the proposed project, in conjunction with other development, would not have a significant cumulative impact associated with solid waste, and the project's cumulative impact would be less than significant.

Mitigation: None required.

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CHAPTER 5

Alternatives

The purpose of this chapter is to describe and evaluate a reasonable range of alternatives to the proposed project in order to inform the public and decision makers regarding the comparative merits of alternatives that might avoid or substantially lessen any of the project's significant environmental effects.

A. CEQA Requirements

CEQA requires that an EIR describe and evaluate a range of reasonable alternatives to the proposed project, or to the location of the proposed project, and evaluate the comparative merits of the alternatives (*CEQA Guidelines* Section 15126.6(a), (d)). The “range of alternatives” is governed by the “rule of reason,” which requires the EIR to set forth only those alternatives necessary to foster informed decision-making and public participation (Section 15126.6(a), (f)).

The range of alternatives shall include alternatives that would feasibly attain most of the basic objectives of the project and would avoid or substantially lessen any of the significant effects of the project (*CEQA Guidelines* Section 15126.6(a)-(c)). CEQA generally defines “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors. In addition, the following may be taken into consideration when assessing the feasibility of alternatives: site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and the ability of the proponent to attain site control (Section 15126.6(f)(1)). If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR (Section 15126.6(f)(2)(B)).

The description or evaluation of alternatives does not need to be exhaustive, and an EIR need not consider alternatives for which the effects cannot be reasonably determined and for which implementation is remote or speculative. An EIR need not describe or evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project (*CEQA Guidelines* Section 15126.6(d)).

The “no project” alternative must be evaluated. This analysis shall discuss the existing conditions, as well as what could be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services (*CEQA Guidelines* Section 15126.6(e)(2)).

CEQA also requires that an environmentally superior alternative be selected from among the alternatives. The environmentally superior alternative is the alternative with the fewest or least severe adverse environmental impacts. When the “no project” alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives (*CEQA Guidelines* Section 15126.6(e)(2)).

B. Project Objectives

As previously presented in Chapter 3, *Project Description*, the proposed project is designed to achieve a specific set of objectives. The selection of alternatives was designed to create a range of alternatives that would achieve at least some of the project objectives. **Table 5-1** at the end of this chapter itemizes each of the project objectives and summarizes how each alternative evaluated may or may not meet the objectives. The objectives of the proposed project are as follows:

- Repurpose the site with a mix of residential, open space, commercial, and water-related uses that will create and support a lively waterfront and a pedestrian-friendly environment.
- Provide water and maritime-related job and business opportunities consistent with the site’s waterfront location and maritime history.
- Create a continuous public waterfront promenade and sequence of public waterfront open spaces that provide opportunities for walking, biking, kayaking, and other waterfront activities.
- Provide a mix of uses and activities that will support a variety of lifestyles and employment opportunities.
- Assure a significant portion of new residential development is affordable to households at all income levels.
- Establish linkages to the surrounding city and neighborhoods for all modes of travel.
- Provide clear, safe access and linkages for pedestrians and bicyclists.
- Strengthen references to the historic background of the site and environs through design.

C. Factors in the Selection and Rejection of Alternatives

The *CEQA Guidelines* provide that an EIR should briefly describe the rationale for selecting the alternatives to be discussed, identify any alternatives that were considered by the lead agency but were rejected as infeasible, and briefly explain the reasons underlying the lead agency’s determination (*CEQA Guidelines* Section 15126.6(c)). The following factors were considered in identifying the reasonable range of alternatives analyzed in this EIR:

- Requests for information regarding the relative environmental impacts of different development programs and different numbers of housing units by interested parties, community members, and decision makers at the scoping sessions;

- The extent to which the alternative would avoid or substantially lessen any of the significant environmental effects of the project;
- The feasibility of the alternative, taking into account site suitability, availability of infrastructure, consistency with applicable plans and regulatory limitations, and other factors;
- The extent to which an alternative contributes to a “reasonable range” of alternatives necessary to permit an informed decision;
- The extent to which the alternatives may inform public decision making about whether to amend existing City plans and zoning and to adopt revised development plans for Encinal Terminals;
- The requirement of the *CEQA Guidelines* to consider a “no project” alternative and to identify an “environmentally superior” alternative;
- Previously completed planning and other studies concerning Encinal Terminals; and
- The extent to which the alternative would feasibly accomplish most of the basic project objectives.

Elimination and/or Reduction of Significant Impacts

CEQA Guidelines § 15126.6(b) states that “Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.”

Potentially significant environmental impacts that would result from the proposed project are evaluated in Chapter 4.0, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR. With implementation of the project design features, standard conditions and requirements, and mitigation measures identified for each resource area significantly impacted, many of the potentially significant impacts resulting from the proposed project would be reduced to a less than significant level. The proposed project impacts listed below would remain significant and unavoidable even after mitigation, and the alternatives evaluated in this EIR have been selected because they are anticipated to reduce and/or eliminate one or more of the significant impacts associated with the proposed project.

- **Impact 4.G-2:** The proposed project would increase traffic volumes at study intersections. (Significant and Unavoidable)

Alternatives Considered But Rejected for Further Consideration

CEQA Guidelines Section 15126.6(c) requires an EIR to identify and briefly discuss any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process. In identifying alternatives, primary consideration was given to alternatives that would reduce significant impacts while still meeting most of the basic project objectives.

Alternative Site: Section 15126.6(f)(2) of the CEQA *Guidelines* sets forth the following criteria for determining whether to identify an alternative site because “An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.” CEQA *Guidelines* Section 15126.6(f)(2) states:

- (A) “Key question. The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.”
- (B) “None feasible. If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project, which must be in close proximity to natural resources at a given location.”
- (C) “Limited new analysis required. Where a previous document has sufficiently analyzed a range of reasonable alternative locations and environmental impacts for projects with the same basic purpose, the lead agency should review the previous document. The EIR may rely on the previous document to help it assess the feasibility of potential project alternatives to the extent the circumstances remain substantially the same as they relate to the alternative (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 573 . . .).”

Because the basic purpose of the proposed project is to redevelop the Encinal Terminals site, an alternative site would not be feasible as an alternative to the proposed project. The purpose of the proposed project is to determine the best uses and development standards and requirements for the project site. Consideration of an alternative that analyzes the impact of developing a different property located at some other location would have no practical use or relevance to the decisions that must be made about the development of this particular piece of property. Therefore, an alternative site is not considered a feasible alternative to the proposed project, and is not analyzed in this SFEIR.

D. Description of Alternatives Selected for Analysis

The alternatives selected for analysis are designed to inform the public discussion and the final decisions by the City of Alameda Planning Board and City Council on the proposed project. Specifically, the range of alternatives is designed to inform decision makers about:

- Potential modifications to the proposed project that might minimize or avoid environmental impacts.
- The relative change in environmental impact (increase or decrease) that might be expected due to potential modifications to the proposed project.
- The impact on the City’s ability to achieve the project objectives with the potential modifications to the project.

Alternative 1 – The No Project Alternative

This alternative considers the environmental impacts of continuing the existing uses on the site, which include leasing all or a portion of the existing site for industrial and manufacturing use. The site is currently vacant. Under the No Project Alternative, former uses, such as the shipping container maintenance and storage operations or other distribution and/or industrial type uses are allowed to lease the property.

Alternative 2 – No Public Trust Land Exchange Alternative

Under this alternative, the project site would be developed with 589 residential units on the land within the site that is currently not encumbered by the Tidelands restrictions. The six-acre parcel in the center of the site that is subject to the State of California's Public Trust for commerce, navigation and fisheries would remain and be leased to Tidelands compatible uses. As required by law, development of the existing tidelands area would be restricted to those uses that further the purposes of the Trust, including maritime-related uses, water-oriented recreation, visitor-serving facilities, habitat preservation, and scientific study. Residential and general commercial uses would not be developed within the tidelands area; rather, these uses would be developed on the remainder of the site. **Figure 3-3** shows the location of the tidelands area.

Alternative 3 – The Northern Waterfront General Plan Amendment Development Alternative

Under this alternative, the project site would be developed with a the mix of uses envisioned in the 2008 Northern Waterfront General Plan Amendment (GPA) EIR. In this alternative, the property would be developed with 165 new single family and duplex homes and approximately 200,000 square feet of commercial space. Like the proposed project, this alternative would include the marina with up to 160 boat slips the waterfront improvements. This alternative does include the Tidelands exchange anticipated in the project proposal. This alternative also represents a lower density residential alternative to the project proposal

E. Environmental Assessment

This section presents an environmental assessment of each alternative by environmental topic compared to the proposed project. As permitted by CEQA, the significant environmental effects of the alternatives are discussed in less detail than are the effects of the proposed project (CEQA *Guidelines*, Section 15126.6(d)). However, the analysis is conducted at a sufficient level of detail to provide the public and decision-makers with adequate information to fully evaluate the alternatives and to approve any of the alternatives without further environmental review.

Table 5-1 below provides an analysis of the ability of each alternative to meet the project objectives. As shown in the table, the No Project Alternative would not meet any of the project objectives.

**TABLE 5-1
FULLFILLMENT OF PROJECT OBJECTIVES**

Project Objectives	Proposed Project	No Project Alternative	No Public Trust Land Exchange Alternative	Norther Waterfront GPA Alternative
Repurpose the site with a mix of residential, open space, commercial, and water-related uses that will create and support a lively waterfront and a pedestrian-friendly environment.	Yes	No	Yes	Yes
Provide water and maritime-related job and business opportunities consistent with the site's waterfront location and maritime history.	Yes	Yes	Yes	Yes
Create a continuous public waterfront promenade and sequence of public waterfront open spaces that provide opportunities for walking, biking, kayaking, and other waterfront activities.	Yes	No	Yes	Yes
Provide a mix of uses and activities that will support a variety of lifestyles and employment opportunities.	Yes	No	Yes	Yes
Assure a significant portion of new residential development is affordable to households at all income levels.	Yes	No	Yes	Yes
Establish linkages to the surrounding city and neighborhoods for all modes of travel.	Yes	No	Yes	Yes
Provide clear, safe access and linkages for pedestrians and bicyclists, where none have existed in the past.	Yes	No	Yes	Yes
Strengthen references to the historic background of the site and environs through design.	Yes	No	Yes	Yes

The impact discussion of each alternative follows, and addresses each alternative's ability to avoid or reduce each of the significant impacts identified for the project. The following evaluation of the environmental impacts is summarized in **Table 5-2**, page 5-16.

Air Quality and Climate Change

Section 4.A, *Air Quality and Climate Change*, determined that development of the proposed project: would not result in any air quality impacts from construction with implementation of **NEW Mitigation Measure 4.A-1**; and would not result in air quality impacts from operational activities with implementation of **NEW Mitigation Measure 4.A-2**. Implementation of **GPA EIR Mitigation Measure AIR-3** would reduce potentially significant impacts to sensitive receptors to less-than-significant levels, and implementation of Mitigation Measure 4.A-4 would ensure the project would not conflict with an applicable air quality plan. The proposed project would not create objectionable odors. The proposed project would have less than significant cumulative impacts related to air quality and greenhouse gases.

Alternative 1: No Project Alternative

Under the No Project Alternative, the existing conditions on the site would remain largely unchanged until such time that leases are executed to allow maritime and distribution uses similar

to the prior uses of the site. As a vacant property, the site would generate fewer transportation related and construction related emissions as compared to the proposed project. Depending on the types of maritime businesses and the amount of truck traffic associated with those uses, the amount of vehicle related and construction related emissions generated by the property would increase and could exceed those anticipated with the proposed project.

Alternative 2: No Public Trust Land Exchange Alternative

Under Alternative 2, the site would be developed with the same mix of uses as the proposed project; however, the lands currently held in public trust near the southern end of the site would be developed with recreation, open space, and water-serving uses, while the residential and commercial uses would be developed on the remaining lands outside of the public trust lands.

Although the arrangement of land uses on the project site would be different under Alternative 2 than the proposed project, Alternative 2 would develop the same total square footage of retail space and number of units as the proposed project. Construction and operational air quality emissions would be substantially the same, and Alternative 2 would be required to implement the same mitigation as the proposed project. Like the proposed project, air quality impacts from Alternative 2 would be less than significant with mitigation.

Alternative 3: Northern Waterfront GPA Development Alternative

Although this alternative has fewer residential units, it has significantly more commercial development than the proposed project. As described in Chapter 4, the total number of vehicle trips associated with this alternative actually exceeds the number of trips associated with the proposed project. Therefore it should be anticipated that the air quality impacts associated with vehicle use in this alternative would exceed those anticipated with the proposed project.

Biological Resources

Section 4.B, *Biological Resources*, determined that the proposed project would not have a significant impact on candidate, sensitive, or special-status species with implementation of **NEW Mitigation Measures 4-1a through 4-1e**, and revised **GPA EIR Mitigation Measure BIO-1**. The proposed project would not have a substantial adverse effect on riparian habitat or other sensitive natural communities with implementation of **NEW Mitigation Measure 4-2a through 4-2c**. Implementation of **GPA EIR Mitigation Measure BIO-2** would reduce adverse effects on federally protected wetlands to less-than-significant levels. The proposed project would not interfere with the movement of native resident or migratory fish or wildlife species or migratory wildlife corridors with implementation of **NEW Mitigation Measures 4-1a, 4-1b, and 4-1c**, as well as **NEW Mitigation 4-3**.

The proposed project would not conflict with local policies or ordinances protecting biological resources with implementation of **GPA EIR Mitigation Measure BIO-1** and **NEW Mitigation Measures 4-1a through 4-1e**, **NEW Mitigation Measures 4-2a through 4-2c**, **GPA EIR Mitigation Measure BIO-2**, and **NEW Mitigation Measure 4-3**. The proposed project would conflict with an adopted local, regional, or State Habitat Conservation Plan with implementation

of **GPA EIR Mitigation Measures BIO-1 and BIO-2, NEW Mitigation Measures 4-1a through 4-1e, 4-2a through 4-2c, and 4-3**. Finally, the proposed project would not result in significant cumulative impacts to biological resources with implementation of the above mentioned mitigation measures.

Alternative 1: No Project Alternative

Under the No Project Alternative, the existing conditions on the site would remain largely unchanged, and the use of the site would be restricted to industrial uses that could occur within the existing buildings on existing large paved areas on the site. No new development would occur within the Oakland Estuary, and no impacts to biological resources would occur under the No Project Alternative.

Alternative 2: No Public Trust Land Exchange Alternative

Under Alternative 2, the site would be developed with the same mix of uses as the proposed project; however, the lands currently held in public trust near the southern end of the site would be developed with recreation, open space, and water-serving uses, while the residential and commercial uses would be developed on the remaining lands outside of the public trust lands. Alternative 2 would involve similar construction activities at the site, which would result in the same impacts to biological resources as the proposed project. Alternative 2 would be required to implement the same mitigation measures as the proposed project, which would reduce impacts to biological resources to less than significant.

Alternative 3: Northern Waterfront GPA Development Alternative

Under Alternative 3, the site would be developed with a similar mix of residential, commercial, recreation, and water-serving uses; however, the alternative would develop fewer housing units as the proposed project, but more commercial development than the project. Alternative 3 would involve construction activities across the entire site, including within the Oakland Estuary, which would result in substantially similar impacts to biological resources as under the proposed project. Alternative 3 would be required to implement the same mitigation measures as the proposed project, which would reduce impacts to biological resources to less than significant.

Land Use

The analysis presented in Section 4.C, *Land Use*, found that development of the proposed project would not divide an established community, or conflict with an applicable land use plan, policy or regulation adopted for the purpose of avoiding an environmental effect with implementation of the mitigation measures discussed throughout this EIR. The proposed project would not conflict with applicable Habitat Conservation Plan, with implementation of **NEW Mitigation Measure 4-1a, 4-1b, 4-1c, 4-1d, 4-2a, 4-2b, 4-2c, and GPA EIR Mitigation Measure BIO-2**. No impacts were identified, and no mitigation measures would be necessary. Section 4.C, *Land Use*, determined that the effects of the proposed project would not increase the severity of significant impacts previously identified in the GPA EIR or introduce a new significant environmental effect.

Alternative 1: No Project Alternative

Under the No Project Alternative, the existing conditions on the site would remain unchanged, and the use of the site would be restricted to industrial uses that could occur within the existing buildings on the site. This Alternative would have no impact to land use, but it would be inconsistent with the City of Alameda General Plan Land Use Element, Housing Element, and Northern Waterfront Element.

Alternative 2: No Public Trust Land Exchange Alternative

Under Alternative 2, the site would be developed with the same mix of uses as the proposed project; however, the lands currently held in public trust near the southern end of the site would be developed with recreation, open space, and water-serving uses, while the residential and commercial uses would be developed on the remaining lands outside of the public trust lands. Like the proposed project, land use impacts would be less than significant with mitigation under this alternative.

Alternative 3: Northern Waterfront GPA Development Alternative

Under Alternative 3, the site would be developed with a similar mix of residential, commercial, recreation, and water-serving uses; however, the alternative would develop fewer housing units as the proposed project, but more commercial development. Although Alternative 3 would develop fewer housing units and more commercial development, the development footprint of this alternative would be the same as the proposed project, and thus would have substantially similar impacts to land use as under the proposed project. Alternative 3 would not conflict with an applicable land use plan, policy or regulation adopted for the purpose of avoiding an environmental effect. Like the proposed project, land use impacts would be less than significant with mitigation under this alternative.

Noise

Section 4.D, *Noise*, determined that construction of the proposed project would expose persons to or generate noise levels in excess of the City noise standards, or result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project at a project and cumulative level; however, implementation of revised GPA EIR Mitigation Measures **NOISE 1a** and **NOISE 1b** would reduce these impacts to less than significant. The proposed project would also result in a substantial permanent increase in noise due to transportation-related operations at a project and cumulative-level, but implementation of revised GPA EIR Mitigation Measures **NOISE-2a**, **NOISE-2b**, and **NOISE-3** would reduce impacts to below a level of significance.

Section Noise 4.D, *Noise*, determined that the project would no expose persons to excessive groundborne vibration or noise levels. Section 4.D, *Noise*, concluded that the effects of the proposed project would not increase the severity of significant impacts previously identified in the GPA EIR or introduce a new significant environmental effect.

Alternative 1: No Project Alternative

Under the No Project Alternative, the existing conditions on the site would remain unchanged, and the use of the site would be restricted to industrial uses that could occur within the existing buildings and large paved areas on the site. The No Project Alternative would not involve any substantial new construction activities, but it could create new sources of ambient noise or vibration due to operational activities or increases in vehicular traffic. The No Project Alternative could have impacts related to noise.

Alternative 2: No Public Trust Land Exchange Alternative

Under Alternative 2, the site would be developed with the same mix of uses as the proposed project; however, the lands currently held in public trust near the southern end of the site would be developed with recreation, open space, and water-serving uses, while the residential and commercial uses would be developed on the remaining lands outside of the public trust lands. Alternative 2 would involve similar noise-generating construction and operation activities as the proposed project. Alternative 2 would result in substantially similar noise conditions as the proposed project. Like the proposed project, Alternative 2 would be required to implement revised **GPA EIR Mitigation Measures NOISE 1a, NOISE 1b, NOISE-2a, NOISE-2b, and NOISE-3**, which would reduce impacts from noise generating activities to less-than-significant levels on a project and cumulative basis. Like the proposed project, Alternative 2 would not involve activities that could expose persons to excessive groundborne vibration or noise levels. Noise-related impacts from Alternative 2 would be less than significant with mitigation.

Alternative 3: Northern Waterfront GPA Development Alternative

Under Alternative 3, the site would be developed with a similar mix of residential, commercial, recreation, and water-serving uses; however, the alternative would develop fewer than half as many housing units as the proposed project (265 units compared to the proposed 589 units). Like the proposed project, Alternative 3 would be required to implement revised **GPA EIR Mitigation Measures NOISE 1a, NOISE 1b, NOISE-2a, NOISE-2b, and NOISE-3**, which would reduce impacts from noise generating activities to less-than-significant levels on a project and cumulative basis. Like the proposed project, Alternative 3 would not involve activities that could expose persons to excessive groundborne vibration or noise levels. Noise-related impacts from Alternative 3 would be less than significant with mitigation.

Population and Housing

Section 4.E, *Population and Housing*, determined that the proposed project would not induce substantial population or housing growth directly or indirectly; displace any people or housing units; or result in any cumulative population and housing impacts. No mitigation measures would be required. Section 4.E, *Population and Housing*, concluded that the effects of the proposed project would not increase the severity of significant impacts previously identified in the GPA EIR or introduce a new significant environmental effect.

Alternative 1: No Project Alternative

Under the No Project Alternative, the existing conditions on the site would remain unchanged, and the use of the site would be restricted to industrial uses that could occur within the existing buildings on the site. No development would occur at the site; therefore, the project would not result in substantial population growth, nor would the project displace any people or housing. The No Project Alternative would have no impact on population and housing.

Alternative 2: No Public Trust Land Exchange Alternative

Under Alternative 2, the site would be developed with the same mix of uses as the proposed project; however, the lands currently held in public trust near the southern end of the site would be developed with recreation, open space, and water-serving uses, while residential and commercial uses would be developed on the remaining lands outside of the public trust lands. Alternative 2 would develop the same number of housing units as the proposed project, and thus would result in the same level of population growth. Like the proposed project, Alternative 2 would not induce substantial population or housing growth that is not already planned for in local and regional plans, and the impact would be less than significant. There are no existing housing units on the site; therefore, Alternative 2 would have no impact related to the displacement of people or housing.

Alternative 3: Northern Waterfront GPA Development Alternative

Under Alternative 3, the site would be developed with a similar mix of residential, commercial, recreation, and water-serving uses; however, the alternative would develop fewer housing units and more commercial than the proposed project. Like the proposed project, Alternative 3 would not induce substantial population or housing growth that is not already included in local and regional plans, and the impact would be less than significant. There are no existing housing units on the site; as such, Alternative 2 would have no impact related to the displacement of people or housing.

Public Services

Section 4.F, *Public Services*, determined that development of the proposed project would not result in any impacts on fire protection services, emergency or medical response services, police protection services, public school services, government facilities, parks, or recreation facilities at a project or cumulative level. No mitigation would be required. Section 4.E, *Population and Housing*, concluded that the effects of the proposed project would not increase the severity of significant impacts previously identified in the GPA EIR or introduce a new significant environmental effect.

Alternative 1: No Project Alternative

Under the No Project Alternative, the existing conditions on the site would remain unchanged, and the use of the site would be restricted to industrial uses that could occur within the existing buildings on the site. No development would occur at the site; therefore, the No Project Alternative would have no impact on public services.

Alternative 2: No Public Trust Land Exchange Alternative

Under Alternative 2, the site would be developed with the same mix of uses as the proposed project; however, the lands currently held in public trust near the southern end of the site would be developed with recreation, open space, and water-serving uses, while the residential and commercial uses would be developed on the remaining lands outside of the public trust lands. Alternative 2 would result in the same level of development as the proposed project, and thus would have similar impacts to public services as the proposed project. Alternative 2 would also be required to comply with the Fire Code, and would be adequately served by existing fire and police facilities. Alternative 2 would result in a similar number of new students attending Alameda Unified School District, and Alternative 2 would also pay the School Facilities Mitigation Fee, which would insure impacts to public school services would be less than significant. Alternative 2 would result in the same impacts to government facilities, libraries, and other public services as the proposed project. Alternative 2 would result in a similar number of new park and recreational facility users as the proposed project, which would not substantially degrade existing facilities as determined in Section 4.F. Alternative 2 would develop similar onsite parks and recreation facilities, the construction of which not result in significant adverse effects with implementation of the mitigation measures discussed throughout this EIR. Like the proposed project, Alternative 2 would result in less than significant impacts to public services.

Alternative 3: Northern Waterfront GPA Development Alternative

Under Alternative 3, the site would be developed with a similar mix of residential, commercial, recreation, and water-serving uses; however, the alternative would develop fewer housing units and more commercial uses. Alternative 3 would result in a similar level of development as the proposed project, and thus would have similar impacts to public services. Alternative 3 would also be required to comply with the Fire Code, and would be adequately served by existing fire and police facilities. Alternative 3 would result in fewer new students attending Alameda Unified School District than the proposed project; however, as for the proposed project payment of the School Facilities Mitigation Fee would insure impacts to public school services would be less than significant under implementation of Alternative 3. Alternative 3 would result in the same impacts to government facilities, libraries, and other public services as the proposed project. Like the proposed project, Alternative 3 would result in less than significant impacts to public services.

Transportation and Circulation

Section 4.G, *Transportation and Circulation*, determined that the proposed project would result in significant impacts to local intersection levels of service (LOS), but the project would result in a decrease in average local per capita vehicle miles traveled (VMT) locally and regionally. Recommended mitigation measures would reduce vehicular traffic, but these reductions in vehicle trips would not eliminate impacts to local intersection LOS. The project would improve pedestrian access and bicycle access and safety in the area and on the site. The proposed project would result in less than significant impacts related to: bicycle level of service, transit level of service, freeways, roadway hazards, emergency access, policies, plans, and programs supporting alternative transportation, and construction traffic.

Alternative 1: No Project Alternative

Under the No Project Alternative, the existing conditions on the site would remain largely unchanged until such time that leases are executed to allow maritime and distribution uses similar to the prior uses of the site. As a vacant property, the site would generate fewer transportation related LOS impacts as compared to the proposed project. Depending on the types of maritime businesses and the amount of truck traffic associated with those uses, the amount of vehicle and truck trips generated by the property would increase and could exceed those anticipated with the proposed project. The no project alternative could also result in an increase in local and regional average household VMT if the proposed units are constructed in a suburban location, instead of on the proposed site.

Alternative 2: No Public Trust Land Exchange Alternative

Under Alternative 2, the site would be developed with the same mix of uses as the proposed project. Because Alternative 2 would develop the same amount of retail square footage, housing units, and recreational uses as the proposed project, the estimated increase in vehicular trips due to construction and operation of the proposed project would be the same as under Alternative 2 as for the proposed project. Alternative 3 would be required to implement the same mitigation measures as the proposed project, and would result in the same impacts to transportation and circulation as under the proposed project.

Alternative 3: The Northern Waterfront GPA Development Alternative

Although this alternative has fewer residential units, it has significantly more commercial development than the proposed project. As described in Chapter 4, the total number of vehicle trips associated with this alternative actually exceeds the number of trips associated with the proposed project. Therefore it should be anticipated that the local morning (AM) Level of Service (LOS) impacts associated with the proposed project would be reduced under this alternative due to the reduced number of housing units, but the daily and PM LOS impacts would increase due to the larger number of automobile trips.

Utilities and Service Systems

Section 4.H, *Utilities and Service Systems*, determined that the project would increase wastewater demand to levels that could exceed the capacity of existing conveyance and treatment facilities; however, implementation of **Mitigation Measure 4.H-2** would reduce these impacts to less than significant. The proposed project would also require the expansion of existing stormwater conveyance facilities, which could result in significant environmental effects; however, implementation of **Mitigation Measure HYD-2** would reduce these impacts to less-than-significant levels. The proposed project would not result in an exceedance of the wastewater treatment requirements of the applicable Regional Water Quality Control Board; result in a demand in water greater than what could be served by existing entitlements, or require new or expanded water treatment facilities; generate solid waste that could not be accommodated by existing landfills, or conflict with existing solid waste regulations; or result in any cumulative solid waste impacts. Section 4.F, *Utilities and Service Systems*, concluded that the effects of the

proposed project would not increase the severity of significant impacts previously identified in the GPA EIR or introduce a new significant environmental effect.

Alternative 1: No Project Alternative

Under the No Project Alternative, the existing conditions on the site would remain unchanged, and the use of the site would be restricted to industrial uses that could occur within the existing buildings on the site. No Project Alternative would have no impact on utilities and service systems.

Alternative 2: No Public Trust Land Exchange Alternative

Under Alternative 2, the site would be developed with the same mix of uses as the proposed project; however, the lands currently held in public trust near the southern end of the site would be developed with recreation, open space, and water-serving uses, while the residential and commercial uses would be developed on the remaining lands outside of the public trust lands. Alternative 2 would involve the same improvements to existing water, wastewater, and stormwater facilities serving the project site as the proposed project. Alternative 2 would also result in a similar demand for new water, wastewater, landfill, and stormwater facilities as the proposed project. Like the proposed project, Alternative 2 would implement **Mitigation Measure HYD-2**, to reduce impacts from stormwater to less than significant levels. Alternative 2 would similarly comply with all applicable solid waste regulations as the proposed project. With implementation of **Mitigation Measure HYD-2**, Alternative 2 would result in less than significant impacts to utilities and service systems.

Alternative 3: The Northern Waterfront GPA Development Alternative

Under Alternative 3, the site would be developed with a similar mix of residential, commercial, recreation, and water-serving uses; however, the alternative would develop fewer housing units and more commercial development than the proposed project. Alternative 3 would involve the same improvements to existing water, wastewater, and stormwater facilities serving the project site as the proposed project. Alternative 3 would also result in similar, though slightly lower, demand for new water, wastewater, landfill, and stormwater facilities as the proposed project. As discussed in Section 4.F, *Utilities and Service Systems*, such demand could be accommodated by existing facilities, and the project would not necessitate the expansion of any utility service facilities such that significant environmental effects would occur. Like the proposed project, Alternative 3 would implement **Mitigation Measure HYD-2**, to reduce impacts from stormwater to less than significant levels. Alternative 3 would similarly comply with all applicable solid waste regulations as the proposed project. With implementation of **Mitigation Measure HYD-2**, Alternative 3 would result in less than significant impacts to utilities and service systems.

F. Environmentally Superior Alternative

Based on the evaluations above and the thresholds of significance used for each environmental topic in Chapter 4, the environmentally superior alternatives would be the No Project Alternative (Alternative 1).

The No Project Alternative would avoid most of the environmental impacts associated with the proposed project, but would not meet any of the project objectives.

As required by CEQA Guidelines Section 15126.6(e)(2), because the environmentally superior alternative is the No Project Alternative, this EIR identifies an environmentally superior alternative from among the other alternatives.

Plan Bay Area, which is the Metropolitan Transportation Commission and the Association of Bay Area Governments' regional plan for reduction of greenhouse gases, states that best way to reduce greenhouse gases regionally, improve air quality regionally, and reduce traffic regionally, is to focus development within the Planned Development Areas within the in the Bay Area. *Plan Bay Area* states that constructing additional housing in mixed use developments like the proposed project in locations like the City of Alameda Northern Waterfront GPA planning area will decrease pressures to develop in the outer Bay Area communities, reduce vehicle miles traveled, and generally improve air quality and reduce greenhouse gases.

Recent State legislation (discussed in detail in Chapter 4 Transportation) also argues that impacts to local intersection levels of service may be inconvenient and undesirable from a quality of life perspective, but they should not be considered impacts to the environment when implementing the California Environmental Quality Act (CEQA). Recent State legislation states that Vehicle Miles Travelled (VMT) should be the transportation metric that is used to determine environmental impact under CEQA.

However, for the purpose of this analysis, which does include a consideration of LOS impacts and the findings of Chapter 4, the Northern Waterfront GPA Development Alternative would be the environmentally superior alternative of the alternatives considered because it will result in less severe LOS Impacts than the proposed project in the morning (AM) peak period in Alameda. From a VMT perspective, if the Northern Waterfront GPA alternative (approximately 165 units) were amended to insure that the other 423 units were constructed elsewhere in the City of Alameda on another site, then the Northern Waterfront GPA alternative would be comparable to the proposed project from a VMT perspective, as well. If those units are constructed in a suburban location on the edge of the Bay Area as the result of the Northern Waterfront GPA alternative, then that alternative would be not be environmentally superior.

Because the Northern Waterfront GPA Development Alternative would reduce the significant and unavoidable LOS traffic impacts, compared to the proposed project, this analysis finds that the Northern Waterfront GPA Development Alternative would be the Environmentally Superior Alternative.

**TABLE 5-2
SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES**

	No Project	Proposed Project	Alternative 2: No Public Trust Land Exchange Alternative	Alternative 3: Northern Waterfront GPA Alternative
A. Air Quality and Climate Change				
Impact 4.A-1: The proposed project would not result in localized construction dust-related air quality impacts; generate construction emissions that would result in a substantial increase of criteria pollutants and precursors for which the air basin is in nonattainment under an applicable federal or state ambient air quality standard; or expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM _{2.5}). (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.A-2: The proposed project would not generate operational emissions that would result in a considerable net increase of criteria pollutants or precursors for which the air basin is in nonattainment under an applicable federal or state ambient air quality standard or expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM _{2.5}). (Less than Significant)	N	LSM	LSM	LSM
Impact 4.A-3: The proposed project would not expose sensitive receptors to substantial pollutant concentrations (Less than Significant)	N	LSM	LSM	LSM
Impact 4.A-4: The proposed project would not create objectionable odors affecting a substantial number of people. (Less than Significant)	N	LS	LS	LS
Impact 4.A-5: The proposed project would not conflict with or obstruct the implementation of the applicable air quality plan. (Less than Significant)	N	LSM	LSM	LSM
Impact 4.A-6: The proposed, when combined with past, present and other reasonably foreseeable development in the vicinity, would not result in cumulative air quality impacts (Less than Significant)	N	LSM	LSM	LSM↓
B. Biological Resources				
Impact 4.B-1: The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the United States Fish and Wildlife Service. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.B-2: Development facilitated by the proposed project would not have a substantial adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Less than Significant with Mitigation)	N	LSM	LSM	LSM

TABLE 5-2 (Continued)
SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES

	No Project	Proposed Project	Alternative 2: No Public Trust Land Exchange Alternative	Alternative 3: Northern Waterfront GPA Alternative
B. Biological Resources (cont.)				
Impact 4.B-3: Development facilitated by the proposed project would have a substantial adverse effect on federally protected wetlands, 'other waters', and navigable waters as defined by Sections 404 and 10 of the Clean Water Act and waters of the State through direct removal, filling, hydrological interruption, or other means. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.B-4: Development facilitated by the proposed project would not interfere with the movement of 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. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.B-5: Development facilitated by the proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.B-6: Development facilitated by the proposed project would conflict with an adopted local, regional, or State Habitat Conservation Plan. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.B-7: The proposed project, in conjunction with other past, current, or foreseeable development in Alameda, could result in cumulative impacts on biological resources. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
C. Land Use				
Impact 4.C-1: The proposed project would not physically divide an established community. (Less than Significant)	N	LS	LS	LS
Impact 4.C-2: The proposed project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the General Plan and zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)	N	LS	LS	LS
Impact 4.C-3: The proposed project would not conflict with an applicable Habitat Conservation Plans or Natural Community Conservation Plans. (Less than Significant)	N	N	N	N
Impact 4.C-4: The proposed project, combined with cumulative development in the defined geographic area, including past, present, reasonably foreseeable future development, would not have significant adverse cumulative land use impacts. (Less than Significant)	N	LS	LS	LS

TABLE 5-2 (Continued)
SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES

	No Project	Proposed Project	Alternative 2: No Public Trust Land Exchange Alternative	Alternative 3: Northern Waterfront GPA Alternative
D. Noise				
Impact 4.D-1: Construction of proposed project elements could expose persons to or generate noise levels in excess of the City noise standards or result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.D-2: Construction facilitated by the proposed project could potentially result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (Less than Significant)	N	LS	LS	LS
Impact 4.D-3: Transportation-related operations facilitated by the proposed project could result in a substantial permanent increase in ambient noise levels in the vicinity or above levels existing without the project. (Less than Significant with Mitigation)	N	LSM	LSM	LSM↓
Impact 4.D-4: The proposed project would result in exposure of people to cumulative increases in construction noise levels. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.D-5: Increases in traffic from development facilitated by the proposed project in combination with other development could potentially result in cumulatively considerable noise increases. (Less than Significant)	N	LS	LS	LS↓
E. Population and Housing				
Impact 4.E-1: The proposed project would not induce substantial population or housing growth directly or indirectly. (Less than Significant)	N	LS	LS	LS
Impact 4.E-2: The proposed project would not displace any people or housing units. (No Impact)	N	N	N	N
Impact 4.E-3: Development facilitated by the proposed project, in conjunction with potential past, present, and future development in the surrounding region, would not result in unanticipated population, housing, or employment growth, or the displacement of existing residents or housing units on a regional level. (Less than Significant)	N	LS	LS	LS
F. Public Services				
Impact 4.F-1: The proposed project would result in an increase in calls for fire protection and emergency medical response services, but would not require new or physically altered fire protection facilities in order to maintain acceptable performance objectives. (Less than Significant)	N	LS	LS	LS↓
Impact 4.F-2: The proposed project would result in an increase in calls for police services, but would not require new or physically altered police facilities in order to maintain acceptable performance objectives. (Less than Significant)	N	LS	LS	LS↓

TABLE 5-2 (Continued)
SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES

	No Project	Proposed Project	Alternative 2: No Public Trust Land Exchange Alternative	Alternative 3: Northern Waterfront GPA Alternative
F. Public Services (cont.)				
Impact 4.F-3: The proposed project would result in new students for local schools, but would not require new or physically altered school facilities to maintain acceptable performance objectives. (Less than Significant)	N	LS	LS	LS↓
Impact 4.F-4: The proposed project would result in increased use of other governmental facilities, including libraries, but would not require new or physically altered government facilities to maintain acceptable performance objectives. (Less than Significant)	N	LS	LS	LS↓
Impact 4.F-5: The proposed project would increase the use of existing neighborhood and regional parks and recreation centers, but not to the extent that substantial physical deterioration of the facilities would occur or be accelerated, nor would it cause the necessity for new or expanded facilities. (Less than Significant)	N	LS	LS	LS↓
Impact 4.F-6: The proposed project includes recreational facilities and the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Less than Significant)	N	LS	LS	LS↓
Impact 4.F-7: The project, in conjunction with other past, current, or foreseeable development in Alameda, could result in impacts related to public services and recreation. (Less than Significant)	N	LS	LS	LS↓
G. Transportation and Circulation				
Impact 4.C-1: The proposed project would increase average citywide household or employee per capita VMT. (Significant and Unavoidable)	N	SU	SU	SU
Impact 4.C-2: The proposed project would increase traffic volumes at study intersections. (Significant and Unavoidable)	N	SU	SU	SU
Impact 4.C-3: Implementation of the proposed project would cause the Pedestrian LOS to degrade to worse than LOS B, but would not create a safety hazard for pedestrians. (Less than Significant)	N	LSM	LSM	LSM
Impact 4.C-4: Implementation of the proposed project would not cause the Bicycle segment LOS to degrade to worse than LOS B or create a safety hazard for bicyclists. (Less than Significant)	N	LS	LS	LS
Impact 4.C-5: Implementation of the proposed project could not cause travel speeds to decrease by 10 percent or more along a street segment that currently serves as a transit route or is planned to serve as a transit route. (Less than Significant)	N	LS	LS	LS

TABLE 5-2 (Continued)
SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES

	No Project	Proposed Project	Alternative 2: No Public Trust Land Exchange Alternative	Alternative 3: Northern Waterfront GPA Alternative
G. Transportation and Circulation (cont.)				
Impact 4.C-6: The proposed project would not substantially increase traffic volumes on area freeways. (Less than Significant)	N	LS	LS	LS
Impact 4.C-7: The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than Significant)	N	LS	LS	LS
Impact 4.C-8: The proposed project would result in inadequate emergency access. (Less than Significant)	N	LS	LS	LS
Impact 4.C-9: Development facilitated by the proposed project could potentially be inconsistent with adopted policies, plans, and programs supporting alternative transportation. (Less than Significant)	N	LS	LS	LS
Impact 4.C-10: The proposed project would generate temporary increases in traffic volumes on area roadways during construction. (Less than Significant)	N	LS	LS	LS
Impact 4.C-11: The proposed project would result in cumulative transportation impact to intersection levels of service. (Significant and Unavoidable)	N	SU	SU	SU↓
H. Utilities and Service Systems				
Impact 4.H-1: The proposed project would not result in an exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board. (Less than Significant)	N	LS	LS	LS↓
Impact 4.H-2: The proposed project would not have wastewater service demands that would result in a determination by the service provider that it does not have adequate capacity to serve projected demand, necessitating the construction of new or expanded wastewater treatment facilities. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.H-3: The proposed project would result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)	N	LSM	LSM	LSM
Impact 4.H-4: The proposed project would have sufficient water supplies available to serve the development from existing entitlements and would not require the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)	N	LS	LS	LS↓

TABLE 5-2 (Continued)
SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES

	No Project	Proposed Project	Alternative 2: No Public Trust Land Exchange Alternative	Alternative 3: Northern Waterfront GPA Alternative
H. Utilities and Service Systems (cont.)				
Impact 4.H-5: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate solid waste generated by the project, and would comply with federal, state, and local statutes and regulations related to solid waste. (Less than Significant)	N	LS	LS	LS↓
Impact 4.H-6: The proposed project, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in cumulatively considerable impacts to utilities and service systems. (Less than Significant)	N	LS	LS	LS↓
<div> <div> LSM = Less than Significant with any proposed mitigation LSM↑ = Less than significant with any proposed mitigation, but also increased effect compared to proposed project LSM↓ = Less than significant with any proposed mitigation, but also decreased effect compared to proposed project </div> <div> SU = Significant and Unavoidable SU↑ = Significant and Unavoidable, but also increased effect compared to proposed project SU↓ = Significant and Unavoidable; but also decreased effect compared to proposed project N = No Impact LS = Less than Significant </div> </div>				

References

ABAG and MTC, 2013. *Plan Bay Area Environmental Impact Report*. July 2013.
<http://onebayarea.org/regional-initiatives/plan-bay-area/plan-elements/environmental-impact-report.html>

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CHAPTER 6

Other Statutory Sections

Consistent with CEQA Guidelines Section 15126.2, this section addresses growth-inducing effects, significant irreversible environmental changes, cumulative impacts (when considered with other projects), significant unavoidable environmental, and effects found to be less than significant.

A. Growth-Inducing Effects

The CEQA Guidelines require that an EIR evaluate the growth-inducing impacts of a proposed action (Section 15126.2[d]). A growth-inducing impact is defined by CEQA Guidelines Section 15126.2(d) as:

[T]he ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth.... It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement would result if a project involved construction of new housing that would result in new residents moving to the area. A project can have indirect growth-inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Increases in population could tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. The CEQA Guidelines also require analysis of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The timing, magnitude, and location of land development and population growth are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Because city and

county general plans define the location, type and intensity of growth, they are the primary means of regulating development and growth in California.

Both the Alameda General Plan (as proposed for amendment as part of the project) and the Bay Area's Sustainable Communities Strategies, *Plan Bay Area*, anticipate growth at the project site of the nature and density proposed with the project. Hence, the development of the proposed project has been anticipated by the City in its long-range planning efforts in the Northern Waterfront General Plan Amendment (Northern Waterfront GPA) as well as in the regionally forecast growth of the Bay Area. Thus, the proposed project would not result in unplanned growth; rather, it would accommodate an increase in both population and employment growth in Alameda as compared to the existing condition. Specifically, improved infrastructure would allow for growth to occur on the project site that has been constrained by the condition of existing facilities.

The growth inducing impacts analysis addresses the potential of the project for growth inducement in the project vicinity or broader area. Under CEQA, a project is generally considered to be growth-inducing if it results in any one of the following:

1. Extension of urban services or infrastructure into a previously unserved area;
2. Extension of a transportation corridor into an area that may be subsequently developed; or
3. Removal of obstacles to population growth (such as provision of major new public services to an area where those services are not currently available).

Extension of Urban Services or Infrastructure

Although onsite infrastructure improvements would occur as part of the proposed project, the site is within an urban setting, and the project infrastructure would connect to existing city infrastructure and not require any major expansions of infrastructure other than on the site itself. The project would not extend infrastructure to any other undeveloped areas. The project site, although occupied by existing industrial buildings, is currently vacant and located in an urban area. Hence, the proposed project would be infill development within an existing urban area.

Extension of Transportation Corridor

The proposed project would include improvements to streets that serve the project site and connect the project site to the existing street network as part of the vision of integrating the project site with the City. The project site is adjacent to City development on the east, south, and west. As a redevelopment property, the proposed project would not extend transportation corridors into undeveloped areas resulting in growth inducing impacts. In fact, the project site's location near Interstate 880 and regional alternative transportation systems could result in a reduced impact on regional transportation systems and air quality than would comparable development outside of the City, or an area with a lower concentration of population within the County.

Removal of Obstacles to Population Growth

The project involves the approval of a Master Plan, and other development approvals, for the project site to accommodate the proposed development. These amendments would remove “obstacles to population growth” only for the project site. The amendments would not facilitate population growth on any other property in the City or surrounding area.

While the proposed project would improve infrastructure that serves the site, these improvements would allow for growth to occur only on the project site and would not facilitate population growth on any other property.

The proposed project would result in the development of up to 589 residential dwelling units and up to 50,000 square feet of commercial space. The Association of Bay Area Governments (ABAG) estimates that by 2040, Alameda will increase its housing stock by 18 percent over 2010 levels (from 32,350 housing units to 38,240 housing units). Therefore, the growth in housing units proposed by the project, and thus population growth generated by the proposed project, would be within the ABAG projections for the City of Alameda.

Further, because the project site is included in *Plan Bay Area* within the potential Northern Waterfront PDA, from a regional standpoint the project is part of a coordinated strategy for managing land use patterns and transportation investments to accommodate projected population growth while also reducing emissions of greenhouse gases, consistent with the direction in SB 375. As Plan Bay Area’s transportation projects are tied to the proposed land use development pattern and the region’s population projections, they are inherently designed to focus growth primarily in PDAs, as opposed to other locations in the region. That is, the transportation projects in Plan Bay Area were selected to complement a certain type of land development (balanced and compact) and discourage imbalanced, sprawling, and greenfield development. As such, by specifically being included in the Plan Bay Area, the proposed project is promoting focused infill growth rather than growth beyond targeted areas. By accommodating growth in a targeted urban area, the proposed project would regionally contribute to reduced vehicle miles traveled and greenhouse gas emissions, as required by SB 375. (see the *Land Use* discussion in Section 4.C of this EIR for further discussion of SB 375 and Plan Bay Area).

B. Significant Irreversible Changes

Pursuant to Section 15126.2(c) of the State CEQA Guidelines, an EIR must consider any significant irreversible environmental changes that would be caused by the proposed Project should it be implemented. Section 15126.2(c) states:

“Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.”

Resources that would be permanently and continually consumed by implementation of the proposed project include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would be typical for infill urban development and would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources. Construction activities related to the proposed project would also result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment. With respect to the operational activities of the proposed project, compliance with all applicable building codes, as well as EIR mitigation measures, would ensure that all natural resources are conserved to the maximum extent practicable. It is also possible that new technologies or systems would emerge, or would become more cost-effective or user-friendly, and would further reduce the project reliance upon nonrenewable energy resources.

The CEQA *Guidelines* also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the proposed project. Completion of the proposed project with residential and waterfront land uses would not involve the routine use, transport, storage, or disposal of hazardous wastes other than small amounts of construction chemicals and household cleaners by residents of the site. Commercial and industrial land uses on the site that could potentially include hazardous materials in their operation would be subject to regulatory oversight. Therefore, the potential for the completed project to cause significant irreversible environmental damage from an accident or upset of hazardous materials would be less-than-significant.

Reuse of contaminated properties could result in a greater potential for exposure of the public to hazardous materials. Implementing mitigation measures contained in the Initial Study (Appendix A) to properly remove, treat, manage, or isolate any potentially hazardous materials encountered during project construction would minimize the potential for significant impacts to less than significant.

C. Cumulative Impacts

CEQA defines cumulative impacts as two or more individual impacts which, when considered together, are substantial or which compound or increase other environmental impacts. The cumulative analysis is intended to describe the “incremental impact of the project when added to other, closely related past, present, or reasonably foreseeable future projects” that can result from “individually minor but collectively significant projects taking place over a period of time.” (CEQA Guidelines Section 15355) The analysis of cumulative impacts is a two-phase process that first involves the determination of whether the project, together with existing and reasonably foreseeable projects, would result in a significant impact. If there would be a significant cumulative impact of all such projects, the EIR must determine whether the project’s incremental “contribution” is cumulatively considerable, in which case, the cumulative impact would be significant. (CEQA Guidelines Section 15130)

The analysis of each environmental topic included in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR considers possible cumulative impacts and identifies circumstances in which the project would contribute to significant cumulative impacts.

Cumulative transportation impacts were identified in the analysis. These cumulative analyses assumed that the project-required mitigation transportation system improvements identified in this EIR would be implemented. Nonetheless, transportation impacts would be cumulatively considerable and not fully mitigable. No other cumulative impacts were determined to be significant after mitigation.

D. Significant and Unavoidable Environmental Impacts

In accordance with CEQA Section 21083, and with CEQA *Guidelines* Sections 15064 and 15065, an EIR must also identify impacts that cannot be eliminated or reduced to an insignificant level by mitigation measures included as part of the implementation of the proposed project, or by other mitigation measures that could be implemented, as described in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*. The proposed project would result in significant and unavoidable impacts to transportation, as summarized below:

- **Impact 4.C-2:** The proposed project would increase traffic volumes at study intersections. (Significant and Unavoidable)

References

California Environmental Quality Act (CEQA) Statutes and Guidelines; Public Resources Code 21000-21177) and California Code of Federal Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387. 2010.

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CHAPTER 7

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