Port of Oakland

Eagle Rock Aggregates Oakland Terminal Project

Final Supplemental Environmental Impact Report

Volume 1 of 3 – SEIR

SCH #2001082058

PORT OF OAKLAND

November 2021

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Cover: CSL Tacoma, a self-discharging ocean-going vessel entering the San Francisco Bay (having passed the Golden Gate Bridge). *Cover image courtesy of CSL Americas.*

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List of Abbreviations and Acronyms

µg/m^3	micrograms per cubic meter
2020 and Beyond Plan	Seaport Air Quality 2020 and Beyond Plan
2012 Addendum	last major addendum to the 2002 EIR
A	
AAQS	ambient air quality standards
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACDEH	Alameda County Department of Environmental Health
AC Transit	Alameda County Transit Authority
ACTC	Alameda County Transportation Commission
ADT	average daily traffic
AMS	ancillary maritime services
Army	U.S. Army
AST	aboveground storage tank
ATCM	air toxic control measure
ATCMTD	Advanced Transportation and Congestion Management Technologies Deployment
B	
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BART	Bay Area Rapid Transit
Baseline	Baseline Environmental Consulting
Bay	San Francisco Bay
Bay Area	San Francisco Bay Area
Bay Plan	San Francisco Bay Plan
BCDC	San Francisco Bay Conservation and Development Commission
BMP	best management practice
BRAC	Base Realignment and Closure
C	
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy

CalEEMod	California Emissions Estimator Model
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CAPCOA	California Air Pollution Control Officers Association
CAPP	Community Air Protection Program
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDOC	California Department of Conservation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHC	commercial harbor craft
CHE	cargo handling equipment
CHRIS	California Historical Research Information System
City	City of Oakland
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CARE	Community Air Risk Evaluation
USACE	U.S. Army Corps of Engineers
CTP	Countywide Transportation Plan
CWA	Clean Water Act
cy	cubic yards
D	
dB	decibel
dBA	A-weighted decibel
District	Oakland Army Base area redevelopment district
DPM	diesel particulate matter
DTSC	(California) Department of Toxic Substances Control
DWR	(California) Department of Water Resources
E	
EA	Environmental Assessment
EBMUD	East Bay Municipal Utility District

ECAP	*Oakland 2030 Equitable Climate Action Plan*
EIR	Environmental Impact Report
EIS	Environmental Impact Study
ENGEO	ENGEO Incorporated
ERA or Applicant	Eagle Rock Aggregates
F	
FAST	Fixing America's Surface Transportation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FISCO	Fleet Industrial Supply Center, Oakland
FTA	Federal Transit Administration
G	
GHG	greenhouse gas
GPD	gallons of water per day
GoPort	Global Opportunities at the Port
GVWR	Gross Vehicle Weight Rating
H	
HCM	Highway Capacity Manual
HDS	Hydrodynamic Separator System
HI	Hazard Index
HIA	Hazard Index for Acute Effects
HIC	Hazard Index for Chronic Effects
HMBP	Hazardous Materials Business Plan
HRA	Health Risk Assessment
I	
I-	Interstate
IBC	International Building Code
IGP	(California) Industrial General Permit
L	
LCFS	low-carbon fuel standard
L_{dn}	day-night average noise level
L_{eq}	equivalent noise level
LHMP	Local Hazard Mitigation Plan
LOS	level of service

LUST	leaking underground storage tank
M	
MAQIP	Maritime Air Quality Improvement Plan
MEI	maximally exposed individual
MEIR	maximum exposed individual resident
MEIW	maximum exposed individual worker
MGD	million gallons per day
MMRP	Mitigation Monitoring and Reporting Program
MT	metric tons
mtpy	metric tons per year
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
MW	megawatt
MWWTP	Main Wastewater Treatment Plant
N	
NAAQS	National ambient air quality standards
NAS	Naval Air Station (Alameda)
NAHC	(California) Native American Heritage Commission
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NTAP	Near Term Action Plan
O	
OAB	Oakland Army Base
OBRA	Oakland Base Reuse Authority
ODP	Operational Diversion Plan
OEHHA	California Office of Environmental Health Hazard Assessment
OGV	ocean-going vessel
OHT	Outer Harbor Terminal
OICT	Outer Harbor Intermodal Container Terminal
OPR	(Governor's) Office of Planning and Research

OSHA	Occupational Safety and Health Administration
P	
PCBs	polychlorinated biphenyls
PCSDM	(Port) Post-Construction Stormwater Design Manual
PEV	plug-in electric vehicle
PG&E	Pacific Gas and Electric Company
PLC	Programable Logic Controller
PM	particulate matter
PM10	particulate matter with a diameter less than 10 microns
PM2.5	particulate matter with a diameter less than 2.5 microns
POA	Ports of America
POC	precursor organic compounds
Port	Port of Oakland
ppm	parts per million
PPV	peak particle velocity
PSD	Prevention of Significant Deterioration
Project or Proposed Project	Eagle Rock Aggregates Oakland Terminal Project
PUD	Planned Unit Development
R	
RAP/RMP	Remedial Acton Plan/Risk Management Plan
ROG	reactive organic gas
S	
SAFE	Safer Affordable Fuel-Efficient
SB	Senate Bill
SCA	standard conditions of approval
SCS	Sustainable Communities Strategy
SEIR	Supplemental Environmental Impact Report
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SIP	State Implementation Plan
SO_2	sulfur dioxide
STEP	Secure Truck Enrollment Program
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	(California) State Water Resources Control Board

T

TAC	toxic air contaminant
TCM	Transportation Control Measure
TCP	Traffic Control Plan
TMDL	Total Maximum Daily Loads
TMP	Truck Management Plan
tph	tons per hour
tpy	tons per year

U

UBC	Uniform Building Code
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
UWMP	Urban Water Management Plan

V

V/C	volume-to-capacity
VFD	variable frequency drives
VMT	vehicle miles traveled
VOC	volatile organic compound

W

WOCAP	West Oakland Community Action Plan
WOEIP	West Oakland Environmental Indicators Project
WOSP	West Oakland Specific Plan
WRRP	Waste Reduction and Recycling Plan

Z

ZE	Zero Emission
ZEV	Zero Emission Vehicle

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Executive Summary

ES-1. Project Overview, Location, and Existing Uses

Eagle Rock Aggregates (ERA; Applicant) proposes to construct and operate the ERA Oakland Terminal Project (Proposed Project or Project), a marine terminal at the Port of Oakland (Port) that would import, store, and distribute bulk construction aggregates (i.e., sand and gravel). The Proposed Project is located at the Port's Outer Harbor Terminal (OHT) within the Oakland Outer Harbor along the San Francisco Bay (Bay).

The Project site would utilize Berth 22 for vessel and barge operations and approximately 18 acres of Berth 20, 21, and 22 backlands (land directly adjacent to a vessel berth) for stockpiling and distribution of construction aggregates. The Project site is approximately 18 acres in size and is generally bounded by the Outer Harbor to the north and west, 14th Street and the OHT to the south, and Maritime Street to the east. The Project site lies within the boundary of the Oakland Army Base (OAB) Area Redevelopment Plan, referred to as the OAB Redevelopment Area.

Prior to March 2016, the Project site was part of an active marine terminal. Since then, the Project site has been used on an interim basis for ancillary maritime services (AMS) such as overnight truck parking and shipping container/chassis storage and staging to support Port maritime activities. Existing land uses in the vicinity of the Project site consist of maritime, industrial, and transportation uses. The closest residential community is located approximately one-half mile southeast of the Project site in the West Oakland Prescott neighborhood on the east side of Interstate 880 (I-880).

ES-2 Project Purpose and Objectives

The Proposed Project would assist in meeting current and projected needs for sand and gravel supply in the greater San Francisco Bay Area (Bay Area). Sand and gravel are necessary components for concrete, asphalt, and other construction materials (e.g., concrete blocks, bricks, and pipes), which are used in nearly all construction projects and activities in the Bay Area, including housing, infrastructure, and commercial development. Sand and gravel, in addition to dry concrete additives such as bauxite, slag, and gypsum (also used in sheetrock), are the majority of the construction-related dry bulk cargo handled through other Bay Area ports; these materials are not currently handled at the Port.

The Project objectives are to:

- Accommodate the Port's share of regional cargo throughput and respond to trends and requirements of maritime shipping;
- Provide beneficial cargo use of the Proposed Project site until such time that the Port required the additional capacity for container cargo;

- Strengthen the economic base of the Bay Area by establishing a construction aggregates storage and distribution terminal at the Port; and
- Provide for safe, effective, and efficient movement of aggregate materials to assist in meeting Bay Area construction supply needs.

ES-3 BACKGROUND AND CONTEXT

The City of Oakland (City) prepared the OAB Area Redevelopment Plan that established an 1,800-acre Redevelopment project area in West Oakland, including the OAB, in 2002. The goal of the OAB Area Redevelopment Plan was to alleviate physical and economic blight in West Oakland caused or exacerbated by the closure of the OAB.

An Environmental Impact Report (EIR) for the OAB Area Redevelopment Plan (henceforth referred to as the 2002 EIR) was certified by the City in July 2002 (SCH# 2001082058). Since 2002, the Port has prepared or been involved with multiple addendums[1] to the 2002 EIR (see Chapter 1, *Introduction*). Together, the 2002 EIR, the 2006 *Maritime Street Addendum*, the 2012 *Oakland Army Base Addendum*, the 2015 *Cool Port Addendum*, and the 2019 *7th Street Grade Separation Addendum* are referred to in this document as the "2002 EIR as Addended."

The 2002 EIR as Addended analyzed the development and use of the Port for increased cargo operations, assuming only container cargo. Changing a portion of a terminal from planned container cargo to bulk construction aggregates is considered a change that would require revision to the 2002 EIR as Addended to address any potential changes in the level of impacts. A ~~Draft~~ Supplemental EIR (SEIR) was prepared instead of an Addendum to the OAB Area Redevelopment Plan EIR in accordance with Section 15163 of the California Environmental Quality Act (CEQA) Guidelines.

Because this ~~Draft~~ Final SEIR supplements the previously certified 2002 EIR as Addended to the extent necessary to address the changed conditions and circumstances of the OAB Area Redevelopment Plan with the Proposed Project, the 2002 EIR as Addended would wholly cover and fully apply to the Project with the exception of the supplemental chapters included in this ~~Draft~~ Final SEIR. As such, the Project would be subject to all applicable mitigation measures from the 2002 EIR as Addended.

ES-4 SUMMARY OF ENVIRONMENTAL ANALYSIS AND IMPACTS

This SEIR evaluates the potential for the Proposed Project to affect the following resource topics:

- Aesthetics
- Air Quality
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation
- Utilities, Energy, and Service Systems

[1]The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 [of the 2020 CEQA Statutes and Guidelines] calling for preparation of a subsequent EIR have occurred. An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration (AEP 2020).

Environmental resource topics that are considered adequately addressed in the 2002 EIR as Addended and that are not further evaluated in this ~~Draft~~ Final SEIR are summarized in Section 3.2, "Environmental Topics Adequately Addressed in the 2002 EIR as Addended." **Table ES-1** at the end of this Executive Summary summarizes the Proposed Project impacts and the resulting levels of significance for the OAB Area Redevelopment Plan as modified by the Proposed Project. ~~Three significant and unavoidable impacts were identified for air quality and two significant and unavoidable impacts was identified for cumulative air quality. Other potentially significant effects identified for the Proposed Project could be reduced to less-than-significant levels with implementation of applicable mitigation measures from the 2002 EIR as Addended or, in some cases, newly identified mitigation measures.~~ The OAB Area Redevelopment Plan with the Proposed Project would not result in any new significant impacts not previously disclosed in the 2002 EIR as Addended; however, in an abundance of caution and due to uncertainty from lack of detailed analysis in 2002 EIR as Addended, it was determined that ~~it~~ the Proposed Project would increase the severity of two air quality impacts (out of the three significant and unavoidable impacts identified) and would increase the severity of ~~and a~~one cumulatively significant air quality impact (out of the two cumulatively significant and unavoidable impacts identified). ~~disclosed in the 2002 EIR as Addended.~~Other potentially significant effects identified for the Proposed Project could be reduced to less-than-significant levels with implementation of applicable mitigation measures from the 2002 EIR as Addended or, in some cases, newly identified mitigation measures.

Sections 3.3 through 3.12 of this ~~Draft~~ Final SEIR describe the environmental resources and potential environmental impacts of the OAB Area Redevelopment Plan as modified by the Proposed Project in more detail for those resource areas potentially impacted by the Proposed Project. Each of these sections summarizes the existing environmental setting; provides updates to the regulatory setting since the 2012 Addendum was prepared; and summarizes prior analysis for the OAB Area Redevelopment Plan that may be applicable to the Proposed Project for a specific resource topic. Each section analyzes potential impacts of Proposed Project; identifies mitigation measures to reduce, where possible, any adverse effects from potentially significant impacts of the Proposed Project; and any changes required to the 2002 EIR as Addended. Each of these resource sections includes a summary table listing applicable significance criteria, impacts, and whether the impact has changed compared to the 2002 EIR as Addended.

ES-5 ALTERNATIVES CONSIDERED

Under CEQA, the purpose of the Alternatives Analysis in an EIR is to describe a range of reasonable alternatives to a project that can feasibly attain most of the identified project objectives, but would reduce or eliminate one or more of a project's significant effects. Pursuant to CEQA, the SEIR removed from further evaluation those Alternatives that were determined to be infeasible, failed to meet most of the basic Project objectives, or failed to reduce at least one of the potentially significant impacts of the Proposed Project. Considering all potential environmental effects, Alternative 1, *Stockpile Storage in a Building*, would be the environmentally superior alternative. While diesel and NOx emissions would be the same as the Proposed Project, Alternative 1 would eliminate the significant and unavoidable Project PM2.5 impact at the location of the maximum exposed individual worker (MEIW). However, evaluation of Alternative 1 concluded that it is financially infeasible as a result of the substantial costs (on the order of more than 2 times the Proposed Project costs) to design and construct a building with the necessary vertical and horizontal clearances compounded by extraordinary on-site geotechnical considerations.~~.~~ Regarding other environmental impacts, the Proposed Project and No Project Alternative would not differ substantially from each other. Alternatives are discussed in Chapter 5, *Alternatives*.

ES-6 CUMULATIVE IMPACTS

This ~~Draft~~ Final SEIR uses a projection approach for the cumulative impact analysis. Past, present, and probable future projects that are included in the cumulative analysis were determined using several factors, including the location and type of activity and the characteristics of the activity related to resources with the potential to be affected by the Proposed Project. The primary basis for the cumulative impact analysis is the 2002 EIR as Addended; as a programmatic review document for the redevelopment of a large area, it contains much of the cumulative projection.

The Proposed Project could make a considerable contribution to potential cumulative impacts related to traffic congestion and diesel emissions/air quality emissions. For all other resource topics, either significant cumulative impacts do not exist or the Proposed Project would not have any potential to make a considerable contribution to any potential cumulative impacts. As described in Chapter 4, *Cumulative Impacts,* the OAB Area Redevelopment Plan as modified by the Proposed Project would make a considerable cumulative contribution to air quality emissions.

Table ES-1. Summary of Proposed Project Impacts, Mitigation Measures, Applicable Standard Conditions of Approval (SCA), and Resulting Level of Significance for the OAB Area Redevelopment Plan as Modified by the Proposed Project

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Aesthetics	**Impact AES-1**: Would the Proposed Project substantially degrade the existing visual character or quality of the site and its surroundings?	None	Proposed Project would be consistent with existing views	Less than significant	No
Aesthetics	**Impact AES-2**: Would the Proposed Project create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	Mitigation Measure 4.11-1 and SCA AES-1	Proposed Project would create a new source of light and glare	Less than significant with mitigation	No
Air Quality	**Impact AIR-1**: Would the Project result in construction emissions or total operational emissions exceeding BAAQMD recommended thresholds of ROG, NOx, or PM10 of 15 tons per year (tpy) or greater or 80 pounds per day or greater?	SCA AIR-1, SCA AIR-2, and Mitigation Measure ERA AQ-1 (NEW)	Proposed Project would exceed the BAAQMD thresholds for NOx emissions	Significant and unavoidable (NOx emissions)	No
Air Quality	**Impact AIR-2**: Would the Proposed Project expose sensitive receptors to substantial pollutant concentrations?	Mitigation Measure ERA AQ-1 (NEW) and Mitigation Measure ERA AQ-2 (NEW)	Proposed Project would expose sensitive receptors to substantial pollutant concentrations	Significant and unavoidable	No (For informational purposes, PM2.5 is a change in severity.)

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
	i. Would the Proposed Project result in the potential to expose persons to toxic air contaminants (TACs), such that the probability of contracting cancer for the maximally exposed individual (MEI) exceeds 10 in one million? ii. Would the Proposed Project result in ground level concentrations of non-carcinogenic TACs such that the Hazard Index (HI) would be greater than 1 for the MEI?				
Air Quality	**Impact AIR-3**: Would the Proposed Project conflict with or obstruct implementation of the applicable air quality plan?	Mitigation Measure ERA AQ-1 (NEW)	Proposed Project would exceed BAAQMD thresholds for NOx and PM2.5 concentrations at MEIW	Significant and unavoidable (NOx and PM2.5 concentration at MEIW)	Yes (PM2.5) in an abundance of caution and due to uncertainty from lack of detailed analysis in 2002 EIR as Addended
Air Quality	**Impact AIR-4**: Would the Proposed Project violate any air quality standard or contribute substantially to an existing or projected air quality violation	SCA AIR-2 and Mitigation Measure ERA AQ-1 (NEW)	Proposed Project would exceed BAAQMD thresholds for NOx and PM2.5 concentrations at MEIW	Significant and unavoidable (NOx and PM2.5 concentration at MEIW)	Yes (PM2.5) in an abundance of caution and due to uncertainty from lack of detailed analysis in 2002 EIR as Addended

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Air Quality	**Impact AIR-5**: Would the Proposed Project contribute to carbon monoxide concentrations exceeding the State ambient air quality standards of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for 1 hour?	None	Proposed Project would not exceed carbon monoxide thresholds	Less than significant	No
Air Quality	**Impact AIR-6**: Would the Proposed Project result in a substantial increase in diesel emissions?	Mitigation Measure ERA AQ-1 (NEW)~~,~~ and Mitigation Measure ERA AQ-2 (NEW)	Proposed Project would generate diesel emissions below existing thresholds	Significant and unavoidable	No
Air Quality	**Cumulative Impact AIR-1:** Would the Proposed Project result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Mitigation Measure ERA AQ-1 (NEW~~),~~) and Mitigation Measure ERA AQ-2 (NEW)	Proposed Project would result in a cumulatively considerable new increase of NOx emissions and PM2.5 concentrations	Significant and unavoidable	Yes (PM2.5) in an abundance of caution and due to uncertainty from lack of detailed analysis in 2002 EIR as Addended
Air Quality	**Cumulative Impact AIR-2**: Would the Proposed Project result in a cumulative exposure of sensitive people to substantial pollutant concentrations?	Mitigation Measure ERA AQ-1 (NEW) and Mitigation Measure ERA AQ-2 (NEW)	Proposed Project would result in a cumulative exposure of sensitive people to pollutants above BAAQMD's cumulative health risk thresholds	Significant and unavoidable	No (For informational purposes, PM2.5 is a change in severity.)

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Geology and Soils	**Impact GEO-1 (i)**: Would the Proposed Project directly or indirectly cause substantial risk of loss, injury or death involving: Strong seismic ground shaking?	SCA GEO-3	Proposed Project would not cause or exacerbate seismic ground shaking	Less than significant	No
Geology and Soils	**Impact GEO-1 (ii)**: Would the Proposed Project directly or indirectly cause substantial risk of loss, injury or death involving: Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, and collapse?	SCA GEO-2 and SCA GEO-3	Proposed Project would not substantially exacerbate settlement	Less than significant	No
Geology and Soils	**Impact GEO-2**: Would the Proposed Project result in substantial soil erosion or loss of topsoil?	SCA GEO-1	Proposed Project would not substantially result in a loss of topsoil or erosion	Less than significant	No
Geology and Soils	**Impact GEO-3**: Would the Proposed Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (UBC) (1994)[2], creating substantial risks to life and property?	SCA GEO-2 and SCA GEO-3	Proposed Project would not be subject to excessive risks from expansive soils	Less than significant	No

[2] ~~These SCA are applicable to the Proposed Project using the 2019 version of the California Building Code and the IBC to replace the UBC.~~

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Geology and Soils	**Cumulative Impact GEO-1**: Would the Proposed Project result in a cumulative exposure of persons or property to seismic risk?	None	Proposed Project would not cumulatively contribute to seismic risk	Less than significant	No
Greenhouse Gas Emissions	**Impact GHG-1**: Would the Proposed Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, specifically: i. For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO_2 annually? ii. For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO_2e annually AND more than 4.6 metric tons of CO_2e per service population annually?	Mitigation Measure ERA AQ-1 (NEW) and SCA AIR-2	No determination	No determination	N/A
Greenhouse Gas Emissions	**Impact GHG-2**: Would the Proposed Project conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions?	None	No determination	No determination	N/A

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Hazards and Hazardous Materials	**Impact HAZ-1**: Would the Proposed Project create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	SCA HAZ-1, SCA HAZ-2, ~~SCA HAZ-3,~~ and SCA HAZ-7	Proposed Project would not create a substantial hazard through the routine transport, use or disposal of hazardous materials	Less than significant	No
Hazards and Hazardous Materials	**Impact HAZ-2**: Would the Proposed Project create a substantial hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	SCA- HAZ-1, SCA- HAZ-2, and SCA- HAZ-3	Proposed Project would not create a substantial hazard by an accidental release of the hazardous materials into the environment	Less than significant	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Hazards and Hazardous Materials	**Impact HAZ-3**: Would the Proposed Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, or be another known or suspected contaminated site that would (1) create a significant hazard to the public or the environment, (2) exceed the acceptable excess cancer risk range of 1 x 10^{-5} for commercial or industrial land uses as set forth in the Oakland Urban Land Redevelopment Program Guidance Document (City of Oakland 2000), or (3) exceed the acceptable excess cancer risk range set in the National Contingency Plan (1 x 10^{-6} to 1 x 10^{-4}) for other uses?	Mitigation Measure 4.7-4, Mitigation Measure 4.7-5, Mitigation 4.7-10, SCA- HAZ-1, SCA- HAZ-2, and SCA- HAZ-7	Proposed Project could potentially encounter hazardous materials	Less than significant with mitigation	No
Hydrology and Water Quality	**Impact HYD-1**: Would the Proposed Project violate any water quality standards or waste discharge requirements?	SCA- HAZ-1	Proposed Project would not result in water quality violations or waste discharge violations	Less than significant	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Hydrology and Water Quality	**Impact HYD-2**: Would the Proposed Project result in substantial erosion or siltation on or off site that would affect the quality of receiving waters?	SCA- HAZ-1 and SCA - GEO-1	Proposed Project would not result in substantial erosion or siltation affecting the quality of receiving waters	Less than significant	No
Hydrology and Water Quality	**Impact HYD-3**: Would the Proposed Project result in flooding on or off site?	None	Proposed Project would not contribute to flooding risks	Less than significant	No
Hydrology and Water Quality	**Impact HYD-4**: Would the Proposed Project create or contribute runoff that would be an additional source of polluted runoff?	SCA- GEO-1	Proposed Project would not substantially contribute polluted runoff to receiving waters	Less than significant	No
Hydrology and Water Quality	**Cumulative Impact HYD-1**: Would the Proposed Project contribute to cumulative impairment to San Francisco Bay Water Quality?	None	Proposed Project would not contribute to a cumulatively considerable impact to San Francisco Bay water quality	Less than significant	No
Hydrology and Water Quality	**Cumulative Impact HYD-2**: Would the Proposed Project contribute to cumulative impairment to San Francisco Bay turbidity?	SCA- HAZ-1 and SCA- GEO-1	Proposed Project would not contribute to a cumulatively considerable impact to San Francisco Bay turbidity	Less than significant	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Land Use	**Impact LU-1**: Would the Proposed Project result in a fundamental conflict between adjacent or nearby land uses?	None	Proposed Project would not conflict with adjacent or nearby land uses	Less than significant	No
Land Use	**Impact LU-2**: Would the Proposed Project fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment?	None	Proposed Project would not conflict with an existing plan or result in a substantial physical change to the site	Less than significant	No
Noise	**Impact NOI-1**: Would the Proposed Project generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts?	Mitigation Measure 4.5-1, SCA NOI-1, SCA NOI-2, SCA NOI-3, and SCA NOI-6	Proposed Project would not substantially generate noise in violation with established noise thresholds	Less than significant with mitigation	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Noise	**Impact NOI-2**: Would the Proposed Project generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise?	Mitigation Measure 4.5-1, SCA NOI-1, SCA NOI-2, SCA NOI-3, and SCA NOI-6	Proposed Project would not generate construction-related noise in violation of established thresholds	Less than significant with mitigation	No
Noise	**Impact NOI-3**: Would the Proposed Project generate noise resulting in a 5 A-weighted decibel (dBA) permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	SCA NOI-5	Proposed Project would not substantially increase ambient noise levels	Less than significant	No
Noise	**Impact NOI-4**: Would the Proposed Project expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA) during either project construction or project operation?	SCA NOI-1, SCA NOI-2, SCA NOI-3, SCA NOI ~~SCA~~-5, and SCA NOI-6	Proposed Project would not substantially increase groundborne vibration levels	Less than significant	No
Noise	**Cumulative Impact NOI-1**: Would the Proposed Project result in a cumulative increase in ambient noise levels above 5 dBA?	None	Proposed Project would not cumulatively contribute to an increase in ambient noise levels	Less than significant	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Transportation	**Impact TRANS-1**: Would the Proposed Project cause an increase in traffic which is substantial in relation to the existing or future baseline traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections), or change the condition of an existing street (i.e., street closures, changing direction of travel) in a manner that would substantially impact access or traffic load and capacity of the street system? i. Specifically, would the project cause the existing or future baseline level of service (LOS) to degrade to worse than LOS D (i.e., E) at a signalized intersection which is located outside the Downtown area? ii. At a signalized intersection for all areas where the existing or future baseline LOS is F, cause:	Mitigation Measure ERA TRANS-1 (NEW)	Proposed Project would not substantially affect the LOS at signalized intersections in the vicinity of the site	Less than significant with mitigation	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
	a. The total intersection average vehicle delay to increase by two (2) or more seconds? b. An increase in average delay for any of the critical movements of four (4) seconds or more? c. Or the volume-to-capacity ("V/C") ratio exceeds three (3) percent (but only if the delay values cannot be measured accurately)?				
Transportation	**Impact TRANS-2:** Would the Proposed Project cause a roadway segment on the Metropolitan Transportation System (MTS) to operate at LOS F or increase the V/C ratio by more than three (3) percent for a roadway segment that would operate at LOS F without redevelopment?	None	Proposed Project would not substantially degrade the LOS of congested freeway segments	Significant and unavoidable	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Transportation	**Impact TRANS-3:** Would the Proposed Project substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature that does not comply with California Department of Transportation (Caltrans) design standards (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment or large trucks on neighborhood-serving streets)?	SCA TRANS-2	Proposed Project would not substantially increase traffic hazards	Less than significant	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Transportation	**Impact TRANS-4:** Would the Proposed Project result in inadequate parking capacity or increase the number and incidence of large vehicles parking within surrounding communities or on streets not designated for such uses? Inadequate parking capacity would result in a parking demand (both project-generated and project-displaced) that would not be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the Project site (Project- displaced parking results from the project's removal of standard on-street parking and legally required off-street parking [non-public parking which is legally required])?	SCA TRANS-2	Proposed Project would not substantially decrease parking	Less than significant	No
Transportation	**Cumulative Impact TRANS-1**: Would the Proposed Project contribute to cumulative congestion impacts on area roadways?	ERA TRANS-1 (NEW)	Proposed Project would not cumulatively contribute congestion to the local area	Less than significant	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Utilities, Energy, and Service Systems	**Impact UTL-1:** Would the Proposed Project require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	SCA HAZ-1, SCA HAZ-2, and SCA GEO-1	Proposed Project would not result in significant environmental effects through construction of stormwater drainage facilities	Less than significant	No
Utilities, Energy, and Service Systems	**Impact UTL-2:** Would the Proposed Project exceed water supplies available to serve the redevelopment program from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	None	Proposed Project would not exceed available water supplies	Less than significant	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Utilities, Energy, and Service Systems	**Impact UTL-3**: Would the Proposed Project result in a determination by the wastewater treatment provider that serves or may serve the redevelopment program that it does not have adequate capacity to serve the redevelopment program's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	None	Proposed Project would not exceed existing wastewater treatment capacity	Less than significant	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Utilities, Energy, and Service Systems	**Impact UTL-4:** Would the Proposed Project be served by a landfill with insufficient permitted capacity to accommodate the redevelopment program's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects / Violate applicable federal, state, or local statutes and regulations related to solid waste?	Mitigation Measure 4.9-7, Mitigation Measure 4.9-8, and SCA UTL-2	Proposed Project would not substantially exceed landfill capacity	Less than significant with mitigation	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Utilities, Energy, and Service Systems	**Impact UTL-5:** Would the Proposed Project result in a determination by the energy provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects / Violate applicable federal, state and local statutes and regulations relating to energy standards?	SCA UTL-3	Proposed Project would not exceed existing energy capacity	Less than significant	No
Utilities, Energy, and Service Systems	**Impact UTL-6:** Would the Proposed Project accelerate or advance the timing and extent of roadway repair requirements in and around the project area to a greater extent than would otherwise be required for roadway upkeep and repair under normal vehicular flow conditions?	SCA UTL-6	Proposed Project would not accelerate roadway repair requirements	Less than significant	No

Section	Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Utilities, Energy, and Service Systems	**Cumulative Impact UTL-1**: Would the Proposed Project contribute to a cumulative impact on water supplies from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities?	None	Proposed Project would not cumulatively contribute to an exceedance in available water supplies	Less than significant	No
Utilities, Energy, and Service Systems	**Cumulative Impact UTL-2**: Would the Proposed Project contribute to a cumulative impact on a wastewater treatment provider and require or result in construction of new wastewater treatment facilities or expansion of existing facilities?	None	Proposed Project would not cumulatively contribute to an exceedance in existing wastewater treatment capacity	Less than significant	No
Utilities, Energy, and Service Systems	**Cumulative Impact UTL-3**: Would Proposed Project contribute to a cumulative impact on landfill permitted capacity?	Mitigation Measure 4.9-7 and Mitigation Measure 4.9-8	Proposed Project would not substantially cumulatively contribute to an exceedance in solid waste capacity at any existing landfill facilities	Less than significant with mitigation	No
Utilities, Energy, and Service Systems	**Cumulative Impact UTL-4**: Would the Proposed Project contribute to a cumulative impact on energy and natural gas capacity?	None	Proposed Project would not cumulatively contribute to any energy service impacts	Less than significant	No

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Chapter 1
Introduction

1.1 PROJECT OVERVIEW

ERA proposes to construct and operate the ERA Oakland Terminal Project (Proposed Project or Project), a marine terminal at the Port that would import, store, and distribute bulk construction aggregates (i.e., sand and gravel). The Proposed Project is located at the Port's OHT and would utilize Berth 22 vessel and barge operations and approximately 18 acres of Berth 20, 21, and 22 backlands (land directly adjacent to a vessel berth) for stockpiling and distribution of construction aggregates. The Project site lies within the boundary of the OAB Area Redevelopment Plan, referred to as the OAB Redevelopment Area.

1.2 INTENDED USE OF SUPPLEMENTAL EIR

This ~~Draft~~ Final SEIR has been prepared by the Port as the Lead Agency under CEQA to provide decision makers, public agencies, and the general public with relevant environmental information associated with the Proposed Project. The Port will use this information in determining whether to issue permit(s) or approval(s) for the Project. This ~~Draft~~ Final SEIR does not make a recommendation regarding the approval or denial of the Project.

As the Lead Agency, the Port is responsible for conducting the environmental review of the Project under CEQA. The Lead Agency also has responsibility for determining whether to approve or deny a project once the SEIR has been certified. Other agencies will rely on information in the SEIR to inform them in their decisions whether to issue specific permits related to Proposed Project construction and operation. For the purposes of CEQA, the term "responsible agency" includes all public agencies, other than the Lead Agency, that have discretionary approval authority for the Project. The Bay Area Air Quality Management District (BAAQMD), San Francisco Bay Conservation and Development Commission (BCDC), San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), and the City are responsible agencies for the Proposed Project.

1.3 BACKGROUND AND CONTEXT

1.3.1 Oakland Army Base Area Redevelopment Plan

During the 1980s and 1990s, the United States government closed or transferred the function of numerous military facilities to local cities or counties for community reuse. In 1995, the Federal Base Realignment and Closure (BRAC) Commission recommended closure and realignment of the OAB. The U.S. Army (Army), the lead agency for base closure and transfer, conveyed the majority of the OAB land to the Oakland Base Reuse Authority (OBRA). The OBRA was formed to guide the planning and reuse of the base and manage the base during the transition period from military to community. Upon the BRAC Commission's recommendation to close the OAB, the City began to evaluate how best to implement reuse of the OAB and the surrounding areas taking into consideration OBRA's conceptual vision and

broad policy framework for development. The City prepared the OAB Area Redevelopment Plan that established an 1,800-acre Redevelopment project area in West Oakland, including the OAB. The goal of the OAB Area Redevelopment Plan was to alleviate physical and economic blight in West Oakland caused or exacerbated by the closure of the OAB.

The OAB Redevelopment Area is subdivided into the following areas:

- Generally, the former OAB sub-district, which is further subdivided into two areas:
  - the City of Oakland's Gateway Development Area, and
  - the Port of Oakland's Port Development Area
- The existing maritime areas of the Port, referred to as the Maritime sub-district
- The 16th/Wood sub-district

The Project site is located within the Port's Maritime sub-district of the OAB Redevelopment Area; thus, only the Maritime sub-district is discussed further.

The OAB Area Redevelopment Plan proposed consolidation and realignment of areas within the Port's Maritime sub-district that were not configured at peak efficiency and implementation of other modernizing improvements. These improvements were intended to increase the efficiency of maritime operations and better enable the Port to achieve its targeted capacity for cargo throughput, per the San Francisco Bay Seaport Plan.

Specific objectives of the OAB Area Redevelopment Plan include redevelopment of Port facilities to provide for safe, efficient, and effective movement of people and goods and to accommodate the Port's share of regional cargo throughput.

1.3.2 OAB CEQA History

An EIR for the OAB Area Redevelopment Plan (henceforth referred to as the 2002 EIR) was certified by the City in July 2002 (SCH# 2001082058). In September 2002, the Board of Port Commissioners, acting on behalf of the Port as a Responsible Agency under CEQA, adopted findings and the mitigation program in the 2002 EIR (Resolution No. 02317). The 2002 EIR analyzed at a programmatic level the development and improvement of the Port to meet Port objectives, including increasing Port productivity and efficiency to meet its assigned cargo throughput per the Seaport Plan.

Since 2002, the City and the Port have prepared multiple addendums to the 2002 EIR. Addendums prepared by or with the involvement of the Port are summarized below.

In 2006, the Port prepared the *Maritime Street Addendum* to the 2002 EIR to document that no new or substantially more severe impacts than those previously identified in the 2002 EIR would occur and no subsequent EIR would be required by leaving Maritime Street in its existing location, rather than relocating it to the east, which was originally analyzed in the 2002 EIR (Port of Oakland 2006). This addendum is referred to as the *2006 Maritime Street Addendum*.

In 2012, the City, in consultation with the Port, issued the 2012 Addendum to the 2002 EIR, which evaluated proposed changes to the redevelopment plan, focused primarily on facilities in the City's Gateway Area. This addendum is referred to as the *2012 Oakland Army Base Addendum*. The 2012 Addendum did not identify any new or substantially more severe impacts than those previously identified in the 2002 EIR and the City determined that no subsequent EIR would be required (City of Oakland 2012).

In 2015, the Port prepared the third addendum to the 2002 EIR to document that no new or substantially more severe impacts than those previously identified in the 2002 EIR and its addendums would occur and no subsequent EIR would be required due to the Maritime Support Center Logistics Improvement Project, known as the Cool Port Project (Port of Oakland 2015). This addendum is referred to as the *2015 Cool Port Addendum*. The Cool Port Project included a temperature-controlled warehouse and maritime support and logistics facility designed to increase use of the Port's infrastructure network to import and export perishable goods.

In 2019, the Port prepared a fourth addendum to the 2002 EIR to document that no new or substantially more severe impacts than those previously identified in the 2002 EIR and its addendums would occur and no subsequent EIR would be required for the updated 7th Street Grade Separation Project (Port of Oakland 2019). This addendum is referred to as the *7th Street Grade Separation Addendum*.

Together, the 2002 EIR, the *2006 Maritime Street Addendum*, the *2012 Oakland Army Base Addendum*, the *2015 Cool Port Addendum*, and the *7th Street Grade Separation Addendum* are referred to in this document as the "2002 EIR as Addended."

As part of the 2012 Addendum, an updated Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) was developed and adopted by the Board of Port Commissioners on June 21, 2012 (Resolution No. 12-76). A copy of the 2012 SCA/MMRP is provided in Appendix A as a reference.

1.3.3 OAB Maritime Uses

As described above, the Project Site is located in the Port's Maritime sub-district. The 2002 EIR as Addended states,

"Maritime use is proposed for the…Maritime sub-district. Maritime development is fundamentally industrial; it is the movement of cargo between water-dependent transportation and another mode of transportation (e.g., ship to truck, train to ship, etc.). A marine terminal comprises a berth (the water area where ships anchor), a wharf where cargo is transferred, a yard [backlands area] where cargo is stored, and a gate, where trucks enter and exit the terminal. A marine terminal requires contiguous waterfront land with direct access to the water, outstanding access to interstate roadways, and preferably, outstanding access to interstate rail facilities. A two-story administration building and several miscellaneous one-story buildings (e.g., repair shop, storage, etc.) are typical; large waterfront cargo cranes and a variety of yard equipment are essential to terminal operation."

The Proposed Project is consistent with the maritime use, as outlined in the 2002 EIR as Addended.

1.4 PURPOSE OF SUPPLEMENTAL EIR

This ~~Draft~~ Final SEIR was prepared pursuant to Public Resources Code Sections 21090 and 21166 and CEQA Guidelines Section 15163. The purpose of CEQA is to ensure informed governmental decisions by identifying ways to avoid or reduce environmental damage through feasible mitigation or project alternatives and to provide public disclosure (CEQA Guidelines Section 15002 [a][1]-[4]). As described under Section 1.2 "Intended Use of Supplemental EIR," the Port is the Lead Agency for review of the Project under CEQA. As the Lead Agency, the Port determined that an SEIR is the appropriate CEQA document to address environmental impacts from the Proposed Project.

Pursuant to CEQA Guidelines Section 15163(a), the Lead Agency may prepare a Supplemental EIR if:

(1) Any of the conditions described in Section 15162 [Subsequent EIRs and Negative Declarations] 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.

The 2002 EIR as Addended analyzed the development and use of the Port for increased cargo operations, assuming only container cargo. Changing a portion of a terminal designated for container cargo to bulk construction aggregates is considered a minor change that would require revision to the 2002 EIR as Addended to address any potential changes in the level of impacts. An SEIR was prepared instead of an Addendum to the 2002 EIR as Addended to provide an opportunity for public review and comment under CEQA. This ~~Draft~~ Final SEIR identifies three significant and unavoidable impacts associated with air quality and two cumulatively significant and unavoidable impact related to air quality; however, all significant and unavoidable impacts associated with the Proposed Project were previously identified in the 2002 EIR as Addended.

The 2002 EIR as Addended evaluated all the potential environmental topics as required by CEQA for the entire Redevelopment Area and included mitigation measures to reduce environmental effects. Pursuant to CEQA Guidelines Section 15163(b), an SEIR only needs to contain the necessary information to make the previous EIR adequate for the project. Thus, this ~~Draft~~ Final SEIR does not evaluate all of the CEQA checklist environmental topics, rather it evaluates only environmental topics that require additional analysis due to the change in cargo type and its potential to incur environmental impacts that were not previously evaluated in the 2002 EIR as Addended. Environmental topics for which no further review was required from that in the 2002 EIR as Addended include agricultural resources, biological resources, cultural resources, mineral resources, population/housing, public services, and recreation. Environmental topics requiring additional analysis due to the nature of the Project and evaluated in this ~~Draft~~ Final SEIR include aesthetics; air quality; geology, soils, and seismicity; GHG emissions; hazards and hazardous materials; hydrology and water quality; land use and planning; noise; transportation; and utilities, energy, and service systems.

Because this ~~Draft~~ Final SEIR augments the previously certified 2002 EIR as Addended to the extent necessary to address the changed conditions and circumstances of the OAB Area Redevelopment Plan as modified by the Proposed Project, the 2002 EIR as Addended would wholly cover and fully apply to the Project with the exception of the supplemental chapters included in this ~~Draft~~ Final SEIR. As such, the Project would be subject to all applicable mitigation measures from the 2002 EIR as Addended.

1.5 SCOPING COMMENTS AND ISSUES ADDRESSED

The following discussion explains the scoping process and identified key issues.

1.5.1 Scoping

To provide the responsible and trustee agencies and the public an opportunity to ask questions and submit comments on the content and scope of the ~~Draft~~ Final SEIR, the Port held a public scoping meeting during the public scoping period, which began on August 28, 2019, and ended on September 30, 2019. Notices of the meeting were electronically mailed to interested parties and responsible agencies and were posted on the Port's website.

The scoping meeting was held on September 19, 2019, from 6:00 p.m. to 7:30 p.m. at the Exhibit Room (first floor) at 530 Water Street, Oakland, California. In addition to the Port, Applicant staff, and the environmental document preparer, two individuals attended the scoping meeting. No written comments were submitted at the scoping meeting.

The Port accepted written comments during and outside the 32-day scoping period. During the scoping period, six comment letters were received from the following state, regional, and local entities and dated as indicated:

- Native American Heritage Commission (09/11/2019)
- BayPorte Village Neighborhood Watch (09/27/2019)
- West Oakland Environmental Indicators Project (09/30/2019)
- Bay Area Air Quality Management District (09/30/2019)
- California Department of Transportation (09/30/2019)
- San Francisco Bay Conservation and Development Commission (09/30/2019)

One comment letter was received outside the public scoping period from the following state entity and dated as indicated:

- State of California Department of Justice (10/21/2019)

Prior to the Notice of Preparation (NOP) scoping period, the Port received three general comments letters from the following local entities and dated as indicated:

- Sierra Club, North Alameda County Group (04/25/2019)
- U.S. House of Representatives, U.S. Congress, Barbara Lee (05/13/2019)
- City of Oakland, City Council District 3, Lynette Gibson and Rebecca Kaplan (undated)

General comments, scoping comments, and post-scoping comments were considered in this CEQA evaluation and are summarized in **Table 1.5-1** below.

In addition to the public scoping meeting, the Port and the Applicant met with West Oakland Environmental Indicators Project (WOEIP) on November 13, 2019, February 6, 2020, and August 27, 2020, to provide information on the Proposed Project and receive feedback and concerns from WOEIP on the Proposed Project. Discussion at the February meeting focused on project status, air quality, local hiring practices, and use of low-emissions vehicles. Discussion at the August meeting focused on the CEQA schedule and other Port activities of concern to WOEIP.

1.5.2 Summary of Key Scoping Comments

Table 1.5-1 below summarizes the CEQA comments received during the public scoping period by environmental topic and provides the location of where the comment is addressed.

Table 1.5-1. Summary of Key Scoping Issues

Environmental Topic	Comment Summary	Location in Document that Comment is Addressed
Environmental Justice	West Oakland communities will be exposed to additional air quality and health effects with implementation of the Project.	Refer to Section 3.4, "Air Quality" and Appendix C, *Air Quality and Greenhouse Gas Analysis*, Chapter 4, *Cumulative Impacts*, and Appendix D, *Health Risk Assessment for the Draft SEIR*.
Environmental Justice	The Project will create few jobs for West Oakland residents.	Refer to Chapter 2, *Project Description*.
Cultural and Tribal Cultural Resources	The Native American Heritage Commission (NAHC) and appropriate regional California Historical Research Information System (CHRIS) Center should be contacted and archaeological inventory conducted, if required.	Refer to Section 3.1, "Introduction to Environmental Analysis." This topic was determined to not require further review than what has been completed in the 2002 EIR as Addended.
Cultural and Tribal Cultural Resources	The identification of unknown cultural resources and treatment of cultural resources should be included in mitigation monitoring program plans.	Refer to Section 3.1, "Introduction to Environmental Analysis." This topic was determined to not require further review than what has been completed in the 2002 EIR as Addended.
Air Quality	Analyze dust and air pollution impacts associated with the construction and operation of the Project.	Refer to Section 3.4, "Air Quality" and Appendix C, *Air Quality and GHG Analysis*.
Air Quality	Analyze potential health risk to sensitive populations as a result of Project construction and operation.	Refer to Chapter 4, *Cumulative Impacts*, and Appendix D, *Health Risk Assessment for the Draft SEIR*.
Air Quality	Implement measures to minimize air quality and GHG emissions.	Refer to Section 3.4, "Air Quality," and Chapter 4, *Cumulative Impacts*.

Environmental Topic	Comment Summary	Location in Document that Comment is Addressed
Air Quality	Watering for dust control is not an adequate method to control particulate matter (PM) emissions and it will significantly increase water demand, resulting in additional effects.	Refer to Chapter 2, *Project Description*, Section 3.4, "Air Quality" and Section 3.12, "Utilities, Energy, and Service Systems."
Air Quality	Diesel emissions from the barges will contribute West Oakland pollution.	Refer to Section 3.4, "Air Quality," and Chapter 4, *Cumulative Impacts*.
Traffic/ Transportation	The Project will increase truck traffic.	Refer to Sections 3.4, "Air Quality," 3.6 "Greenhouse Gas Emissions," and 3.11, "Transportation" and Appendix F, *Transportation Technical Appendix*.
Traffic/ Transportation	Consider on-site short and long-term truck parking, truck maintenance and electric truck charging stations to improve safety, reduce pollution and emissions.	Refer to Section 3.11, "Transportation."
Traffic/ Transportation	Perform a freight rail transport analysis and discuss how the project can improve freight sustainability, safety, and efficiency in California.	Refer to Section 3.11, "Transportation."
Traffic/ Transportation	The Project will displace parking without alternatives.	Refer to Section 3.11, "Transportation."
Biological Resources	Dust and runoff entering the Bay may adversely impact fish and other aquatic species.	Refer to Chapter 2, *Project Description* and Section 3.8, "Hydrology and Water Quality"
Land Use	Discuss how the Project is consistent with BCDC's San Francisco Bay Plan and Seaport Plan policies.	Refer to Section 3.9, "Land Use."
Sea Level Rise	Address sea level rise scenarios for years 2050 and 2100.	An analysis of sea level rise scenarios on Port facilities inclusive of the Project site can be found in the Port's 2019 Sea Level Rise Assessment Report (available on the Port of Oakland website).
Hydrology and Water Quality	Implement stormwater Best Management Practices (BMPs) to prevent runoff into the Bay.	Refer to Chapter 2, *Project Description*, Section 3.8, "Hydrology and Water Quality," and Chapter 4, *Cumulative Impacts*.

1.6 PUBLIC REVIEW AND COMMENT

The Port ~~is~~ initially circulate~~ding~~ the ~~Draft~~ SEIR for a 45-day public review and comment period (public review period) on November 6, 2020, with the Port's posting of the Notice of Availability (NOA) on its website[3] along with the electronic Draft SEIR files. In addition, the Port distributed the NOA and the link to electronic files to entities that provided comments on the Project's Notice of Preparation (NOP); this

[3] https://www.portofoakland.com/community/environmental-stewardship/publications/

distribution included responsible agencies and other stakeholders. The Port filed the Notice of Completion (NOC) and the Draft SEIR files with the State Clearinghouse on November 12, 2020, which initiated the agency review and comment period. The public review period for the Draft SEIR was extended twice, officially concluding on January 8, 2021. The revised NOA is posted on the Port's website.~~that will end on Monday, December 21, 2020 at 5 p.m.~~ During the public review period, the Port received eight comment letters, and one comment letter after the public review period for a total of nine comment letters received.~~interested individuals, organizations, and agencies may comment on the Draft SEIR, including evaluation of project impacts.~~ It should be noted that, consistent with CEQA Guidelines Section 15163(d), the~~is~~ Draft SEIR was~~ill be~~ circulated by itself without the 2002 EIR as Addended.

The Port ~~will~~ hosted two public meetings on December 9, 2020, during the public review period, at which time oral comments were~~ill be~~ received. The public meetings were~~ill be~~ held via an online platform consistent with local public health guidelines. The purpose of public circulation and the public meeting was~~is~~ to provide agencies and interested individuals with opportunities to comment on or express concerns regarding the contents of the~~is~~ Draft SEIR. The specific date, times, and online link for the public meetings were~~have been~~ provided in the ~~Notice of Availability~~NOA, on the Port's website, posted at the Project Site, and through several other notification methods.

~~Written comments concerning this Draft SEIR can be submitted at any time during the Draft SEIR public review period. All comments must be received by 5:00 p.m. on December 21, 2020. During the public review period, comments may be submitted in the following ways:~~

- ~~By mail to:~~

  ~~Attn: Khamly Chuop~~
  ~~Port of Oakland~~
  ~~Environmental Programs and Planning Division~~
  ~~350 Water Street~~
  ~~Oakland, CA 94607~~

- ~~By electronic mail to Khamly Chuop, Port Associate Environmental Planner/Scientist, at kchuop@portoakland.com with the subject "Draft SEIR Comment".~~

- ~~Verbal comment at the voicemail box of Khamly Chuop at (510) 627-1758. Please leave name.~~

- ~~Oral testimony at the public meetings to be held at two separate times on Wednesday, December 9, 2020 in order to accommodates varied schedules. The meetings will be at 10:00 a.m. to 11:00 a.m. and from 6:00 p.m. to 7:00 p.m.~~

Comments received in response to ~~this~~ the Draft SEIR during the public review period were~~will be~~ addressed in the "Comments and Responses to Comments" section of the Final SEIR (Volume 3). The Draft SEIR and the ~~Final SEIR (including the~~ response to comments, along with ~~and~~ any necessary revisions to the Draft SEIR~~)~~ ~~will~~ constitute the Final SEIR for the Project.

Before the Port considers approval of the project, the Port, as Lead Agency, is required to certify that the SEIR has been completed in compliance with CEQA, that the information in the SEIR has been considered, and that the SEIR reflects the independent judgment of the Port.

If a project is subsequently approved despite identified significant impacts that would result from the project, CEQA requires the lead agency to prepare and adopt a statement of overriding considerations describing the social, economic, and other reasons for moving forward with the project despite its significant impacts.

1.7 CONTENT AND ORGANIZATION OF THIS SEIR

This ~~Draft~~ Final SEIR contains the following components:

Executive Summary. A summary of the Proposed Project, environmental impacts and mitigation measures, areas of controversy, and alternatives are provided in this chapter.

Chapter 1, *Introduction*. This chapter describes the purpose and organization of the SEIR, its scoping, preparation, and review process, and summarizes the areas of controversy.

Chapter 2, *Project Description*. This chapter summarizes the Proposed Project, including a description of the Project need and objectives, the Project site and existing conditions, construction and operation of the Proposed Project, and required permits and approvals associated with the Project.

Chapter 3, *Environmental Analysis*. This chapter includes an introduction to the environmental analysis (Section 3.1) and resource areas not further analyzed in this ~~Draft~~ Final SEIR (Section 3.2). Sections 3.3 through 3.12 describe the environmental resources and potential environmental impacts of the Proposed Project.

Chapter 4, *Cumulative Impacts*. This chapter addresses the Proposed Project's potential to contribute to cumulative impacts, defined as the incremental impact of the Project when added to other related impacts of past, present, and reasonably foreseeable future projects.

Chapter 5, *Alternatives*. This chapter describes the process by which alternatives to the Proposed Project were developed and screened. This chapter also evaluates likely environmental impacts of the potential alternatives and identifies the environmentally superior alternative.

Chapter 6, *Other CEQA Considerations.* This chapter identifies any significant, unavoidable environmental effects that would result from the OAB Area Redevelopment Plan as modified by the Proposed Project.

Chapter 7, *Report Preparation*. This chapter lists the individuals involved in preparing this ~~Draft~~ Final SEIR.

Chapter 8, *References*. This chapter provides a bibliography of printed references, websites, and personal communications used in preparing this ~~Draft~~ Final SEIR.

Appendices

Appendix A, 2012 Oakland Army Base (OARB) Project Standard Conditions of Approval and Mitigation Monitoring Reporting Program (SCA/MMRP)

Appendix B, Safety Data Sheet for ERA Material

Appendix C, Air Quality and Greenhouse Gas Analysis

Appendix D, Health Risk Assessment for the Draft SEIR

Appendix E, Geotechnical Conditions Report

Appendix F, Transportation Technical Appendix

Appendix G, Ocean Going Vessel Hold Water Quality Analysis

Appendix H, Eagle Rock Aggregates Oakland Terminal Project Mitigation Monitoring and Reporting Program

Chapter 2
Project Description

2.1 PROJECT NEED AND OBJECTIVES

The Eagle Rock Aggregates Oakland Terminal Project (Proposed Project or Project) would assist in meeting current and projected needs for sand and gravel supply in the greater Bay Area. Sand and gravel are necessary components for concrete, asphalt, and other construction materials (e.g., concrete blocks, bricks, and pipes), which are used in nearly all construction projects and activities in the Bay Area, including housing, infrastructure, commercial development, seismic retrofitting, and other improvements. Sand and gravel, in addition to dry concrete additives such as bauxite, slag, and gypsum (also used in sheetrock), comprise the majority of the construction-related dry bulk cargo handled through other Bay Area ports; these materials are not currently handled at the Port. The amount of construction-related dry bulk cargo imported to Bay Area ports is dependent on both the construction needs of the region (demand) and the production capacity of regional and national mines (i.e., domestic supply delivered by haul truck or rail). In its Draft Final 2019-2050 Bay Area Seaport Forecast, BCDC states that California has only approximately 69 percent of the resources for construction aggregates needed to meet demand over the next 50 years. BCDC's forecast anticipates that the share of imported and harvested sand and gravel will increase to 30 percent of California's annual demand by 2050 compared to approximately 8.1 percent in 2018 (Tioga Group 2020).

As described in the 2002 EIR, the primary purpose of the OAB Area Redevelopment Plan is to revitalize the 1,800-acre redevelopment area to eliminate blight and blighting influences resulting from the closure of the OAB and strengthen the economic base in West Oakland. As Port facility modernization evolves, improvements to specific facilities are considered in light of redevelopment objectives during project-level approval and environmental review. The Proposed Project would be consistent with several redevelopment objectives for the OAB Area Redevelopment Plan including:

- Strengthen the economic base
- Allow for sustainable job creation
- Provide for safe, efficient, and effective movement of people and goods
- Respond to trends and requirements of maritime shipping
- Increase Port productivity and efficiency
- Keep competitive with other West Coast ports

The Proposed Project objectives, which support implementation of the OAB Area Redevelopment Plan objectives, are to:

- Accommodate the Port's share of regional cargo throughput and respond to trends and requirements of maritime shipping;
- Provide beneficial cargo use of the Proposed Project site until such time that the Port required the additional capacity for container cargo;
- Strengthen the economic base of the Bay Area by establishing a construction aggregates storage and distribution terminal at the Port; and
- Provide for safe, effective, and efficient movement of aggregate materials to assist in meeting Bay Area construction supply needs.

Operational benefits of utilizing the Proposed Project site include a more centralized Bay Area location for efficient distribution to customers when compared to current operations from the Applicant's Richmond Marine Terminal; sufficient water depth to berth fully-loaded ocean-going vessels (OGVs) and eliminate the need for anchorage transfer of materials (i.e., lightering[4]) prior to berthing; reduced shipping times; close proximity to freeways; and the available space for construction aggregates storage.

2.2 PROJECT LOCATION AND EXISTING SITE CONDITIONS

The Project is located at the Port's OHT within the City along the Bay. The Project site includes Berth 22, which would be utilized for vessel and barge operations, and Berths 20, 21, and 22 backlands for construction aggregates stockpiling and distribution. The Project site is approximately 18 acres in size and is generally bounded by the Outer Harbor to the north and west, 14th Street and the OHT to the south, and Maritime Street to the east. The Bay Bridge touchdown (i.e., the eastern end of the Bay Bridge) is located north of the Project site across the Oakland Outer Harbor. I-880 is located approximately 0.4 miles to the southeast of the Project site. The Project regional vicinity and location are illustrated in **Figures 2-1 and 2-2**.

Prior to March 2016, the Project site was part of the Ports of America (POA) marine container terminal, currently known as the OHT. Since then, the Project site has been used on an interim basis for AMS such as overnight truck parking and shipping container/chassis storage and staging to support Port maritime activities. The Project site is fully paved. Existing site conditions are depicted in Figure 2-2. The two buildings located just north of the Project site are unoccupied structures that were used for administrative support and operations associated with the previous site use as a marine container terminal.

[4] Lightering is the process where OGVs load barges at anchorages to lighten their load and reduce their draft, enabling them to access port facilities that cannot accept large, fully-loaded OGVs due to shallow draft ports, narrow entrances, or small berths.

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Horizon WATER and ENVIRONMENT

Prepared for:
Port of Oakland

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Figure 2-1
Proposed Project Vicinity

Eagle Rock Aggregates Oakland Terminal Project
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Figure 2-2
Proposed Project Site

Eagle Rock Aggregates Oakland Terminal Project
Final Supplemental Environmental Impact Report

Berths 20-24 have been used for a variety of maritime services such as lay berthing and other waterside support services and were originally part of the POA terminal, which consisted of Berths 20-26. A portion of the OHT was incorporated into the expansion of the adjacent TraPac Terminal (formerly Berths 30-32, now Berths 25-33) located southwest of the Project site. Everport Terminal (Berths 35-37) is located further south and west of the Trapac Terminal. Both the Trapac and Everport Terminals currently operate as marine container terminals. Other existing maritime activities within the larger Port maritime area include marine terminal operations (e.g., vessel loading and unloading, vessel berthing); transfer of containers to and from trucks and trains; maritime-related ancillary services (including, but not limited to, truck parking, trucking operations, loaded/empty ocean shipping container storage, and chassis storage); and warehouse storage and distribution.

Existing land uses in the vicinity of the Project site consist entirely of maritime, industrial, and transportation uses. The closest residential community is located approximately one-half mile southeast of the Project site in the West Oakland Prescott neighborhood on the opposite (east) side of I-880.

Access to the Project site is from the 17th Street driveway onto Maritime Street (Maritime/ 17th Street intersection).

2.3 EXISTING ERA OPERATIONS IN THE SAN FRANCISCO BAY AREA

ERA provides high-strength construction aggregates that are used in structural concrete for projects such as high-rise buildings and transportation infrastructure. Structural concrete is a high-strength concrete that is used to carry the structural load of larger structures. The physical properties of ERA's construction aggregates result in increased performance compared to similar construction materials currently available and sourced in California. There is a high demand for concrete made from ERA construction aggregates due to their physical properties, particularly for foundations located in high-density urban areas subject to seismic activity, such as the Bay Area.

ERA construction aggregates include fine aggregates (e.g., concrete sand) and both ½-inch and 1-inch coarse aggregates (rock) that are sourced in British Columbia, Canada. The materials are fully processed to finished products and washed[5] prior to loading onto barges or OGVs[6].

2.3.1 Existing Water Side Operations

From British Columbia, construction aggregates are transported to Vancouver via tug and barge, and to various locations in the United States via OGVs, including the Bay Area and an ERA terminal at the Port of Long Beach in southern California. Currently, ERA offloads its materials at the following three locations within the Bay Area:

- Richmond, CA Marine Terminal

[5] Moisture content at the time of loading is approximately 1 percent for 1-inch coarse aggregates, 2 percent for ½-inch coarse aggregates, and 4-10 percent for sand.
[6] Vessels that typically make calls at existing ERA Bay Area facilities include, but are not limited to, the Honourable Henry Jackman, CSL Tecumseh, and Sheila Ann.

- Redwood City, CA Marine Terminal
- Anchorage 9 (off Hunters Point in the South San Francisco Bay)

ERA's existing water side operations in the Bay Area include material offloading, barge loading and transport, and onshore conveyance. The OGVs used to transport ERA material are Panamax, gravity-fed self-unloader–type vessels. These OGVs are generally between 740 and 804 feet in length with a beam width of 105 feet. The draft[7] of these OGVs range between approximately 27 to 44 feet, depending on the load of the OGV. The OGVs have a general maximum carrying (or deadweight) capacity of up to 80,000 tons. The carrying capacity includes the weight of cargo, fuel, fresh water, ballast water, provisions, passengers, and crew, and does not include the empty weight of the ship. A diagram of a typical gravity-fed self-unloading OGV that is representative of those currently used for ERA water side operations is provided in **Figure 2-3**.

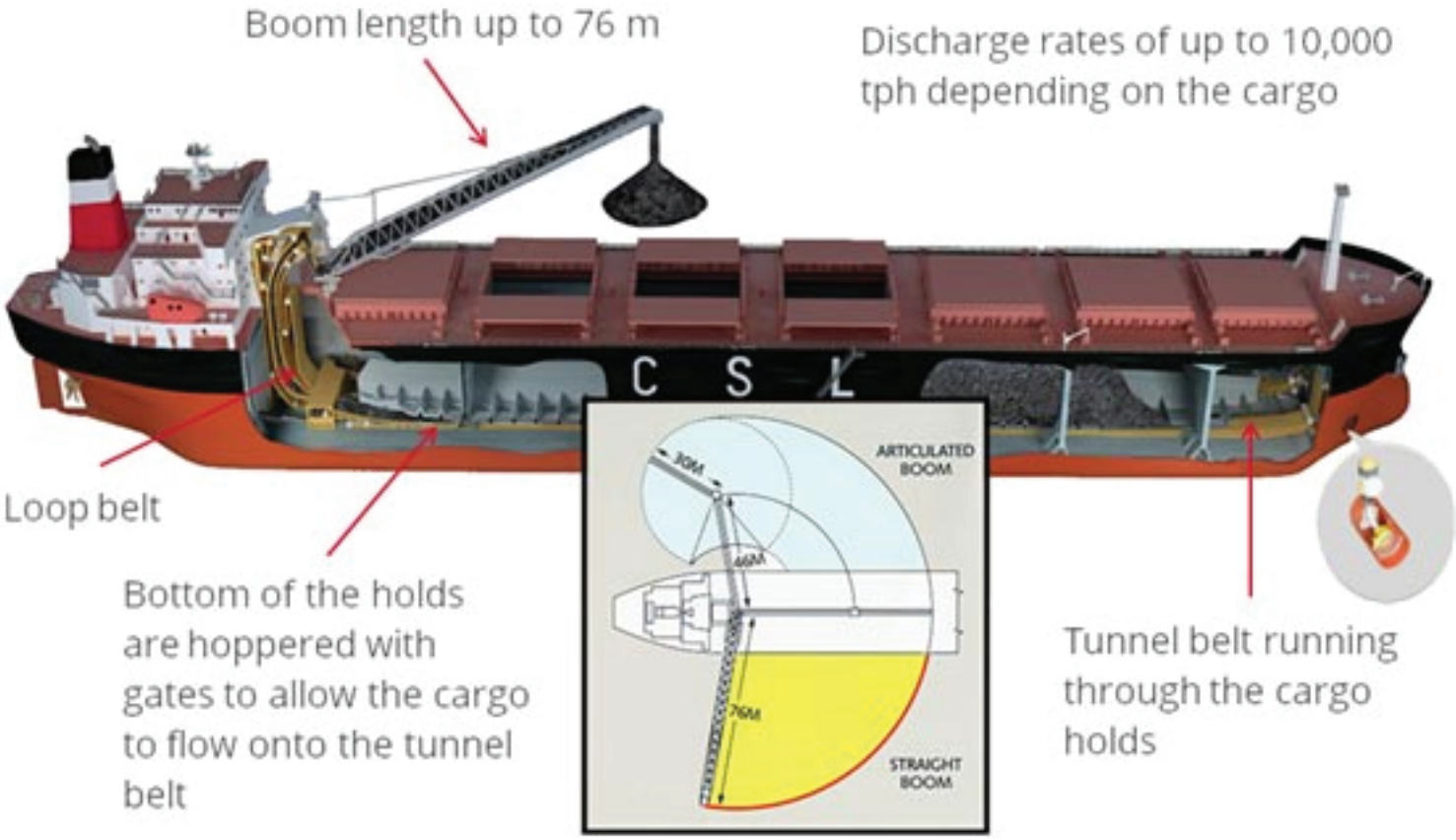
Prior to arrival and due to the shallow water depths at both the Richmond and Redwood City Marine Terminals, OGVs are lightered onto barges at Anchorage 9. Barges are flat-bottomed and used for both lightering purposes as well as interim storage and transport of construction aggregates to the marine terminal locations. Barges are not self-powered and require at least one tug to tow and position them at terminals and anchorages. The lightering process consists of maneuvering a barge by tug alongside an OGV at an anchorage and transferring construction aggregate from the OGV to the barge using the OGV conveyor boom. Tugs are used to hold both the OGV and barges in place during lightering at Anchorage 9. Typically, only one tug is required to support the barge; however, the Peter Lind Barge, described below, requires two tugs to transport and hold the barge in place for lightering to ensure safe operations due to its larger size.

From Anchorage 9, barges also transport ERA construction aggregates to other destinations in the Bay Area, including those described below and shown in **Figure 2-4**:

- The Peter Lind Barge, an open hopper barge, transports and stores ERA construction aggregates to the Cemex concrete processing plant on Pier 92 (500 Amador Street) in the City of San Francisco. The Peter Lind Barge has a capacity of 15,000 tons[8].
- A set of four barges transport ERA construction aggregates to the CalMat Shamrock processing plant on the Petaluma River at 210 Landing Way in Petaluma. These barges each have a capacity of 4,000-4,500 tons.
- The Westar Rock Barge #2, a flat or deck barge, is used primarily for OGV lightering, but is also used for transporting ERA construction aggregates to the Redwood City Marine Terminal. Westar Rock Barge #2 has a capacity of 6,200 tons.

In the Bay Area, ERA currently offloads up to 1,000,000 tons of construction aggregates to barges each year.

[7] The draft of a vessel is the distance of the vessel's bottom below the surface of the water; a vessel must always be in water deeper than its draft or it risks grounding (i.e., striking the bottom).
[8] A U.S. ton is equivalent to 2,000 pounds.



GRAVITY-FED SELF-UNLOADERS. (n.d.). Retrieved January 8, 2020, from https://www.cslships.com/en/our-operations/self-unloaders/how-it-works/gravity-fed-self-unloaders.

Prepared by:
Horizon WATER and ENVIRONMENT

Figure 2-3. Diagram of Typical Ocean-Going Vessel

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Port of Oakland

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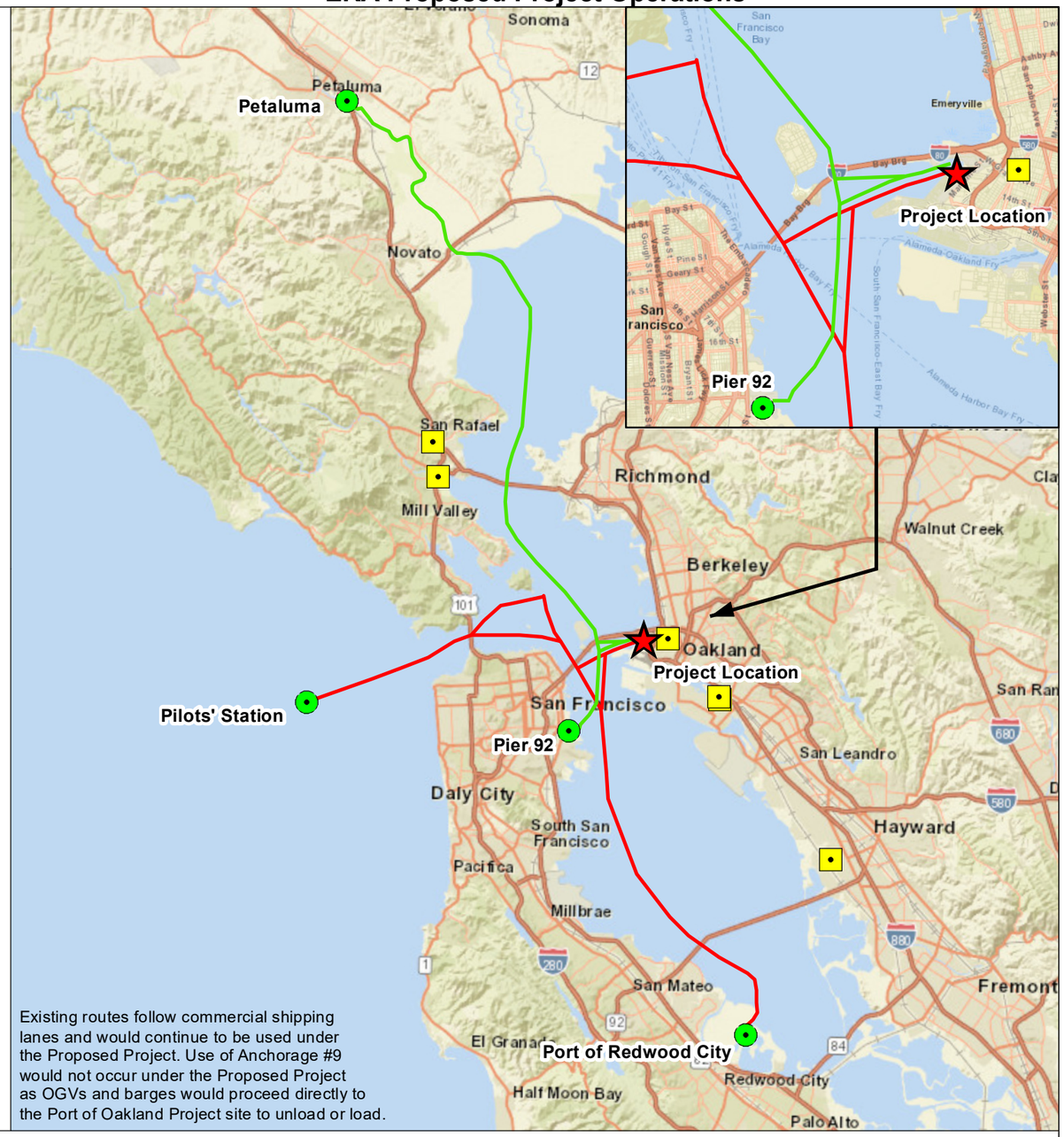
ERA Existing Operations

ERA Proposed Project Operations



Existing routes follow commercial shipping lanes and would continue to be used under the Proposed Project. Use of Anchorage #9 would not occur under the Proposed Project as OGVs and barges would proceed directly to the Port of Oakland Project site to unload or load.

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OGV Route
Barge Route
Primary End User Facility

Figure 2-4
Eagle Rock Aggregates Existing and Proposed Project Operations

Eagle Rock Aggregates Oakland Terminal Project
Final Supplemental Environmental Impact Report

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At the Richmond and Redwood City Marine Terminals, tugs are utilized to bring the OGVs to the respective berths. Once at berth, ERA construction aggregates are offloaded from the OGV to onshore storage and transfer facilities. During OGV offloading, the main engine is shut down and onboard auxiliary power sources are operated in order to provide power, heating, ventilation, and air conditioning to the OGV. The auxiliary power sources for each OGV include one auxiliary boiler and two or three diesel-fueled auxiliary generators that provide electricity to the OGV and the offloading mechanism. While the OGV is being offloaded, the two auxiliary generators run simultaneously to provide necessary power. Outside of offloading, at least one auxiliary generator remains on at all times during OGV berthing. The self-unloading mechanism contained on the OGV is comprised of a series of conveyor belts and a discharge boom. Construction aggregates stored in the hull of the OGV gravity-feed onto conveyor belts to the discharge boom above deck. The discharge boom is lifted and swung in position so that the construction aggregates are conveyed and deposited directly into an onshore or pier-based receiving hopper or onto an adjacent barge. The maximum offloading rate for the Richmond Marine Terminal is approximately 5,000 tons per hour. The maximum offloading rate for Anchorage 9 is approximately 2,500 tons per hour. The maximum offloading rate for Redwood City Marine Terminal is approximately 3,000 tons per hour.

ERA's existing BAAQMD Permit for Plant Number 17985 for operation of the Richmond Marine Terminal allows up to 48 OGV calls and 1,500,000 tons of construction aggregates to be offloaded to the Richmond Marine Terminal in each consecutive rolling twelve-month period. The Redwood City Marine Terminal, operated by Cemex, is permitted by BAAQMD to offload up to 2,500,000 tons of construction aggregates annually. In total, ERA's current maximum throughput of construction aggregates within the Bay Area is 4,000,000 tpy.

2.3.2 Existing Land Side Operations

During offloading from the OGV to the onshore terminals at Richmond (operated by ERA) and Redwood City (operated by Cemex), ERA construction aggregates are conveyed to storage stockpiles. Existing operations at the Richmond Marine Terminal are described in more detail below. Because Cemex operates the Redwood City Marine Terminal, this terminal is not discussed further.

ERA Richmond Marine Terminal Operations

At ERA's Richmond Marine Terminal, construction aggregates are offloaded to an onshore receiving hopper and conveyed to stockpiles located within a covered building. Front-end loaders are used to move construction aggregates from the stockpiles to hoppers that feed a conveyor system that starts on the ground level and becomes elevated so that the construction aggregates can be loaded onto haul trucks (trucks) from overhead. Haul trucks are loaded while on a scale to track the quantity of construction aggregates by weight loaded into each truck.

The construction aggregates are then transported via truck to concrete ready-mix plants throughout the Bay Area. The six primary end user facilities are listed in **Table 2.3-1**. These facilities received between 6 percent to 25 percent of ERA construction aggregates based on 2018 data. Other end user facilities received 5 percent or less of ERA construction aggregates and are located in Antioch, Berkeley, Concord, Oakland, Pleasanton, Union City, Martinez, Hayward, San Rafael, and Richmond. Based on the 2018

data,[9] current operations at the Richmond Marine Terminal result in an average of 99 truck trips per day and a maximum of 300 truck trips per day, which equates to approximately 30,932 and 93,600 truck trips per year, respectively[10]. Data from 2018 is consistent with previous Richmond Marine Terminal operation years and can be considered reflective of a normal operating year.

Table 2.3-1. Primary End User Facilities Receiving ERA Materials

Facility Name	Address
CEMEX Concord	3951 Laura Alice Way, Concord, CA 94520
CEMEX Oakland	333 23rd Ave, Oakland, CA 94606
Central Hayward	1844 W Winton Ave, Hayward, CA 94545
Central Oakland-Peralta	2400 Peralta St, Oakland, CA 94607
Central Oakland-RARM	401 Kennedy St, Oakland, CA 94606
Shamrock San Rafael	548 Du Bois St, San Rafael, CA 94901
Shamrock Rich R/M	101 Rich St, Greenbrae, CA 94904

2.4 PROPOSED PROJECT

In summary, the Proposed Project involves the construction and operation of a construction aggregates import, storage, and distribution terminal at the Port's OHT to receive handymax and panamax-sized[11] self-unloading ships delivering up to 2,500,000 tons of construction aggregates per year (tpy). The terminal would receive three different sized construction aggregates: 1/2-inch rock, 1-inch rock, and concrete sand. Average construction aggregates storage on-site would be approximately 150,000 tons. Exports from the Project site are estimated at 1,500,000 tpy shipped via haul truck and 1,500,000 tpy shipped via barge not to exceed a maximum throughput of 2,500,000 tpy.

The Proposed Project would utilize Berth 22 for vessel and barge operations and Berths 20, 21, and 22 backlands for material storage and distribution. ERA would have priority, but not exclusive use of Berth 22. On occasion, ERA may temporarily berth barges/tugs at Berth 10 while waiting for availability at Berth 22. During operation of the Proposed Project, construction aggregates would be offloaded from OGVs and stockpiled on pavement using a radial stacking conveyor system, and then transported to destination facilities via haul truck or barge. Barges would be loaded using an electric conveyor system fed by front-end loaders. Trucks would also be loaded by front-end loaders. The Oakland Marine Terminal would receive up to 48 OGV calls per year, similar to ERA's Richmond Marine Terminal existing operations. Although ERA plans to move its current Richmond Marine Terminal activities to the Proposed Project site at the Port, for the purposes of this SEIR, operations at the Richmond Marine Terminal are assumed to remain unchanged; modification or dismantling of the Richmond Marine Terminal is not part of the Proposed Project. In the future, ERA may repurpose the Richmond Marine

[9] 2018 had more truck trips compared to 2019 and therefore, represents a more conservative assessment of truck operations.

[10] Based on a 52-week year and 6-day week.

[11] A handymax vessel is a small-sized bulk cargo ship (typically 492-656 feet in length) with a capacity between 35,000 and 50,000 dead weight tonnage (DWT). A panamax vessel is a mid-sized cargo ship meeting the size regulations of the Panama Canal Authority (max length of 965 feet and maximum width of 106 feet) with an average capacity of 65,000 DWT.

Terminal to serve other bulk material needs, subject to the review and approval by municipal and regulatory agencies as required. In addition, the OGVs operating under the Proposed Project would be provided by the same vessel carrier that currently provides the vessels that operate in the Bay Area and at other West Coast ports.

Under the Proposed Project, incoming OGVs would travel from the Pacific Ocean to the Oakland Marine Terminal for offloading, continue on to the Redwood City Marine Terminal for offloading, and return to the Pacific Ocean for the return trip to British Columbia. Due to the greater water depth at the Oakland Marine Terminal, ERA would be able to berth fully-loaded OGVs; lightering at Anchorage 9 and use of Westar Rock Barge #2 would no longer be required with implementation of the Proposed Project. Operations at the Redwood City Marine Terminal would continue similar to the existing condition. Barge transit trips under the Proposed Project would decrease by 9 trips (from 85 to 76 trips) as shown in **Table 2.4-1**. However, this would result in a slight increase of approximately 146 miles (equal to approximately 24 operating hours) in annual barge travel, due to the increased travel distances from Oakland Port Berth 22 to San Francisco Peninsula destinations as compared to the previous travel distances from Anchorage 9.

Table 2.4-1. Existing Proposed Barge Traffic with Removal of Anchorage 9

Barge	Destination	# Existing Annual Trips[1]	Total Existing Miles[1]	Existing Tons	# Proposed Annual Trips[2]	Total Proposed Miles[2]	Proposed Tons
Peter Lind	San Francisco Pier 92	30	150	314,166	36	540	540,000
CalMat Shamrock barges	Petaluma Shamrock Plant	24	1,680	363,602	40	2,800	700,000
Westar Rock Barge #2	Redwood City Marine Terminal	31	1,364	249,191	0[3]	0[3]	0[3]
	Totals	85	3,194	926,959	76	3,340	1,240,000

Notes: Existing barge traffic data provided in table is based on 2019 voyage tonnage as there were more barge trips in 2019 than in 2018, and as such 2019 provides a more conservative barge operation assessment for barge trips.

1. Existing trips and mileage calculated from Anchorage 9 (see Figure 2-4). Trips are round trips.
2. Proposed trips and mileage calculated from Port Berth 22. Trips are round trips.
3. With the elimination of lightering at Anchorage 9, use of the Westar Rock Barge #2 is not anticipated under normal operations. For the purposes of air quality analysis in this SEIR; a maximum throughput scenario was analyzed that conservatively included 33 proposed trips and 495 miles for Westar Rock Barge #2.

Tugs would be utilized for maneuvering OGVs to and from the Oakland Marine Terminal berth. Two tugs would be required for both inbound transit and outbound transit from the terminal.

2.4.1 Project Duration

The initial term of ERA's lease from the Port for the Project site is proposed to be approximately twelve (12) years with a ten-year option followed by a ~~three~~ five-year option~~s~~ to extend, for a total of twenty-seven (27) years.

2.4.2 Project Onshore Components

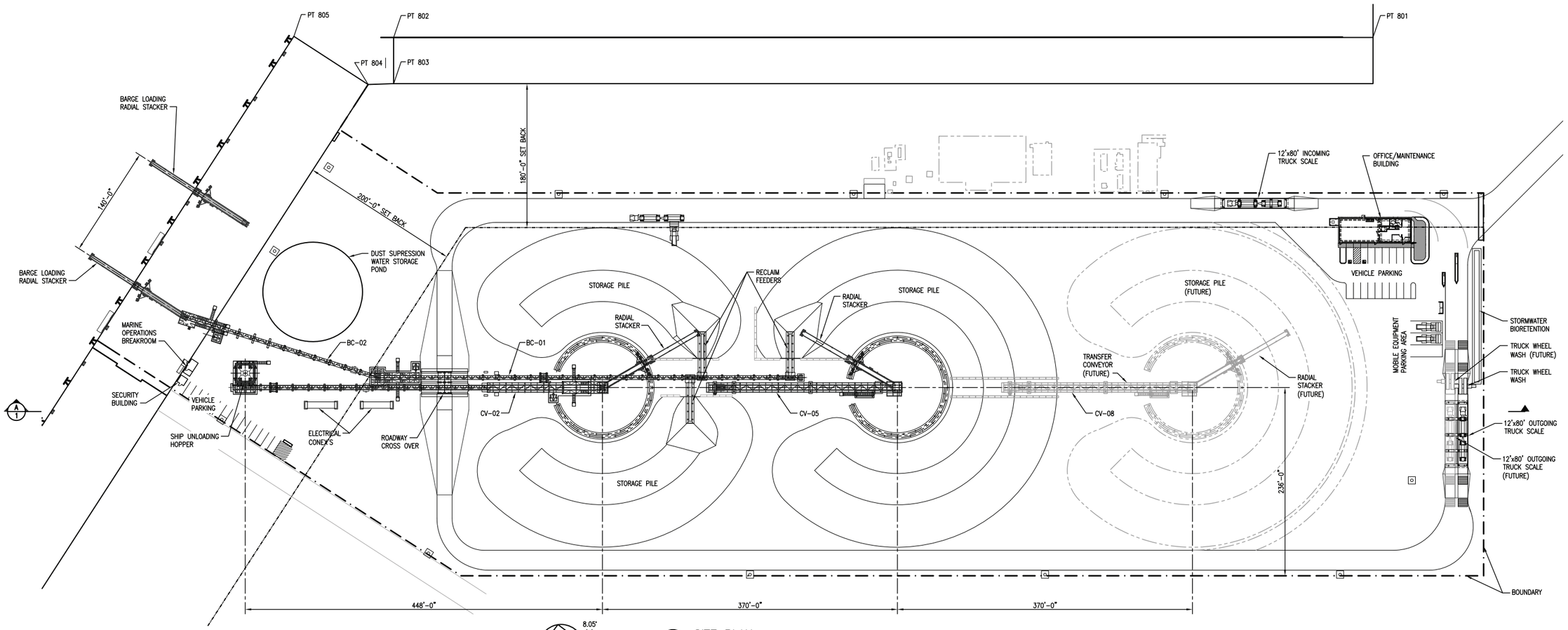
The various components of the Proposed Project that would be used in operations include the following: (1) ship unloading hopper; (2) radial stacking conveyor system; (3) barge reclaim conveyor system; (4) scale house with attached equipment maintenance bay; (5) truck scales; (6) truck tire wash; ~~and~~ (7~~6~~) stormwater collection improvements for stormwater management~~,~~; and (8) water tank storage for dust control~~, and fire suppression~~. All structures would be constructed of steel framing supported on concrete foundations (commonly referred to as a pile cap) with steel pipe piles embedded 100 feet into the ground to counter ground compaction and settling that is anticipated to result under the weight of the stockpiled construction aggregates. All pilings would be located inside the fill key wall[12]; no new in-water piles would be required as part of the Project. Electricity for onshore operations would be purchased from the Port.

Onshore operations components are depicted in **Figures 2-5** through **2-10** and described in more detail below.

SHIP UNLOADING HOPPER

The self-unloading OGV would transfer construction aggregates from the OGV to the stationary ship unloading hopper located on the southwestern side of the Project site within Berth 22. The ship unloading hopper would be a large steel box with a cone or funnel shaped bottom opening for feeding construction aggregates onto the radial stacking conveyor system (described below). The ship unloading hopper would be approximately 36 feet high and have a volume capacity of approximately 100 cubic yards (cy) or 326,000 pounds. The top opening of the hopper would be 20 feet by 20 feet and would narrow down to a smaller funnel-shape emptying onto a feed conveyor approximately 5 feet below the funnel opening. A roller gate located at the bottom of the funnel would regulate the amount of material fed onto the conveyor system. The ship unloading hopper top opening would be equipped with water sprayers to minimize and suppress dust during construction aggregates unloading.

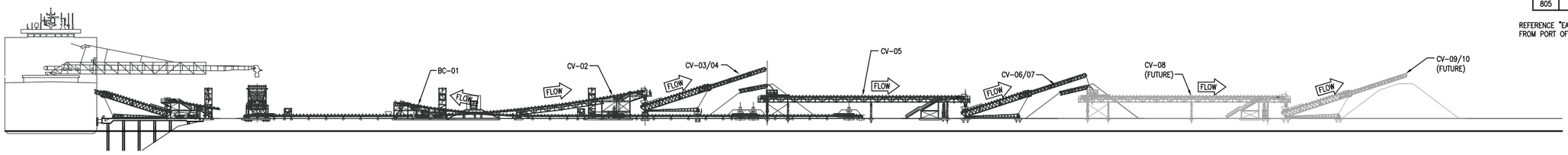
[12] A fill key wall is perimeter wall located underneath a wharf that separates the mass of fill placed to create the wharf from perimeter portions of the wharf that are elevated on piers and exposed to the tide.



1/1 SITE PLAN
1" = 60'-0"

POINT TABLE (REFERENCE)		
PT #	NORTHING	EASTING
801	2,125,647.56	6,039,274.30
802	2,125,819.50	6,038,058.06
803	2,125,762.10	6,038,050.02
804	2,125,765.57	6,038,018.20
805	2,125,838.33	6,037,934.40

REFERENCE "EAGLE ROCK WHARF AND CONTROL.DWG" FROM PORT OF OAKLAND LAND AND SURVEYS & MAPPING



A/1 ELEVATION VIEW
1" = 60'-0"

PRELIMINARY

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Source: SMG 2021

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Horizon WATER and ENVIRONMENT

Prepared for:
Port of Oakland

Figure 2-5. Proposed Site Development Plan

Eagle Rock Aggregates Oakland Terminal Project
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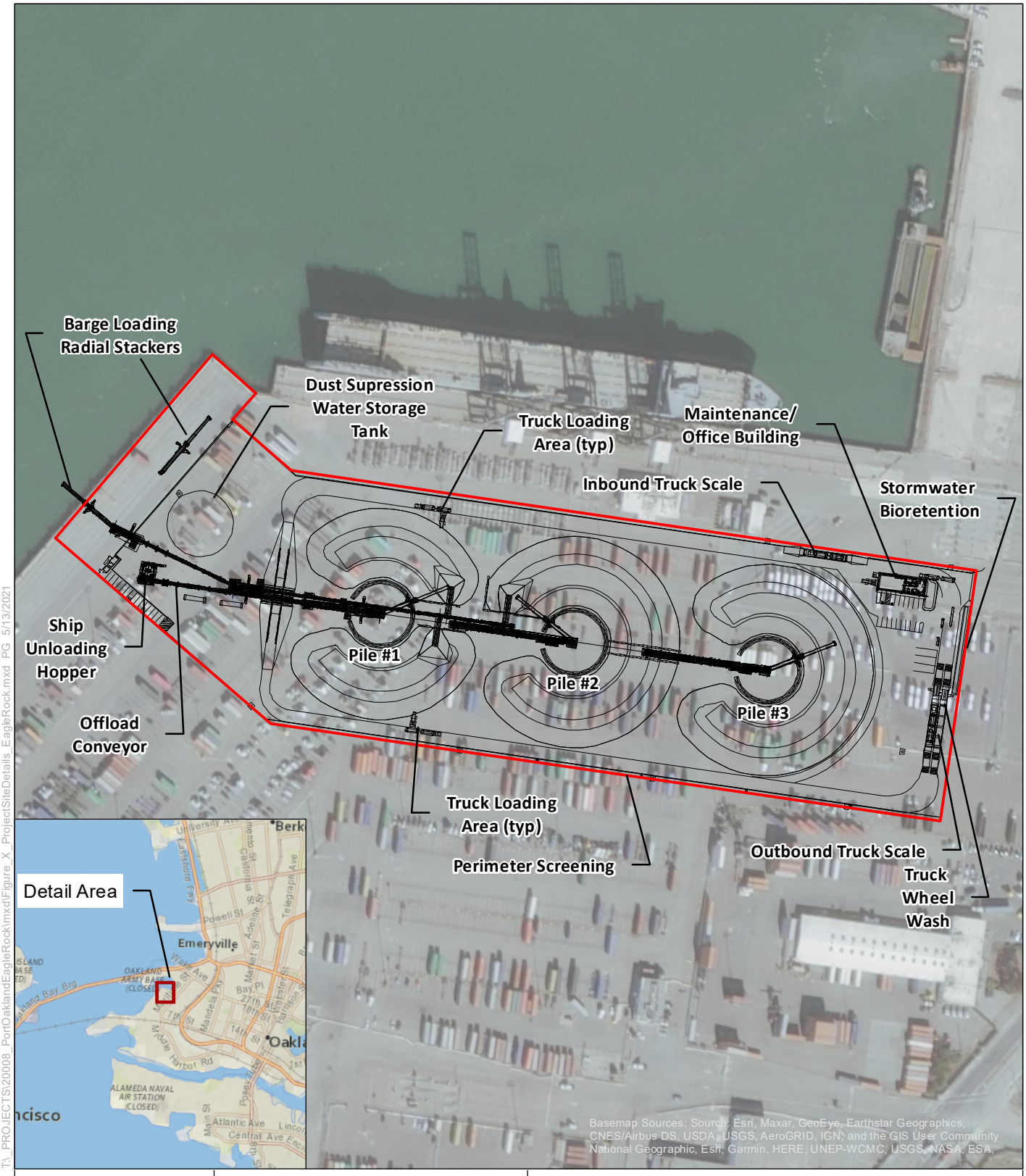

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Horizon WATER and ENVIRONMENT

Prepared for:
Port of Oakland

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Figure 2-6
Proposed Site Development on Aerial Base

Eagle Rock Aggregates Oakland Port Terminal
Final Supplemental Environmental Impact Report

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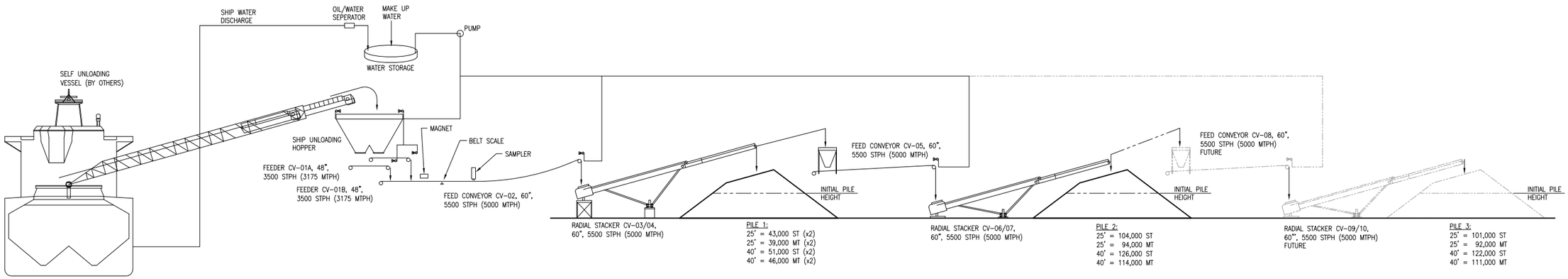
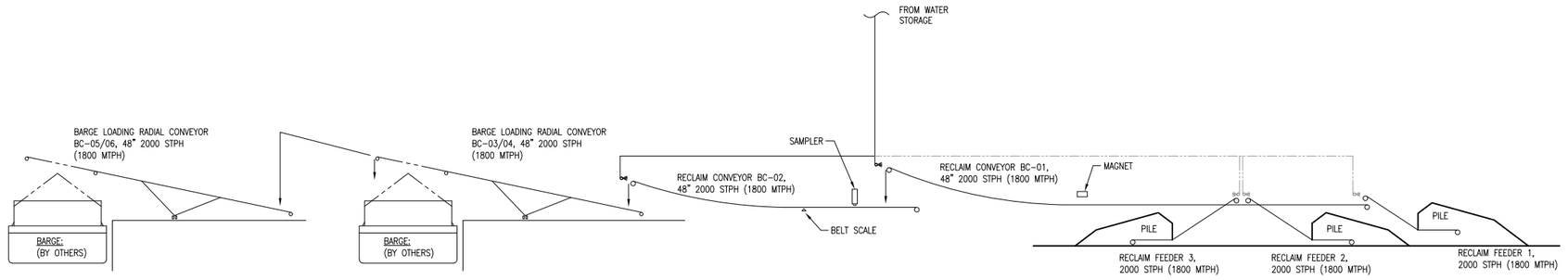
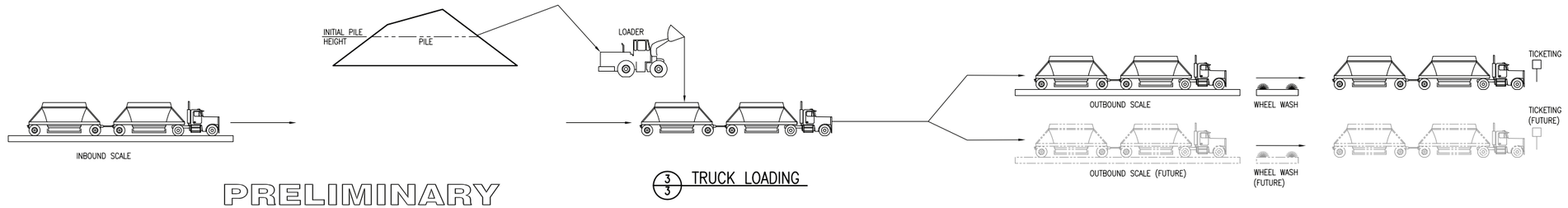


1/3 SHIP UNLOADING/STACKING

STORAGE PILE VOLUMES SHOWN ARE BASED ON AN INITIAL PILE HEIGHT OF 25' ABOVE GRADE AND A MAXIMUM PILE HEIGHT OF 40' ABOVE GRADE



2/3 BARGE LOADING/RECLAIM



3/3 TRUCK LOADING

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Source: SMG 2021

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Prepared for:
Port of Oakland

Figure 2-7. Process Flow Diagram

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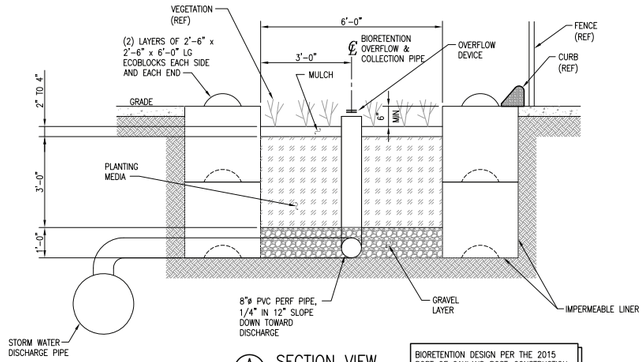
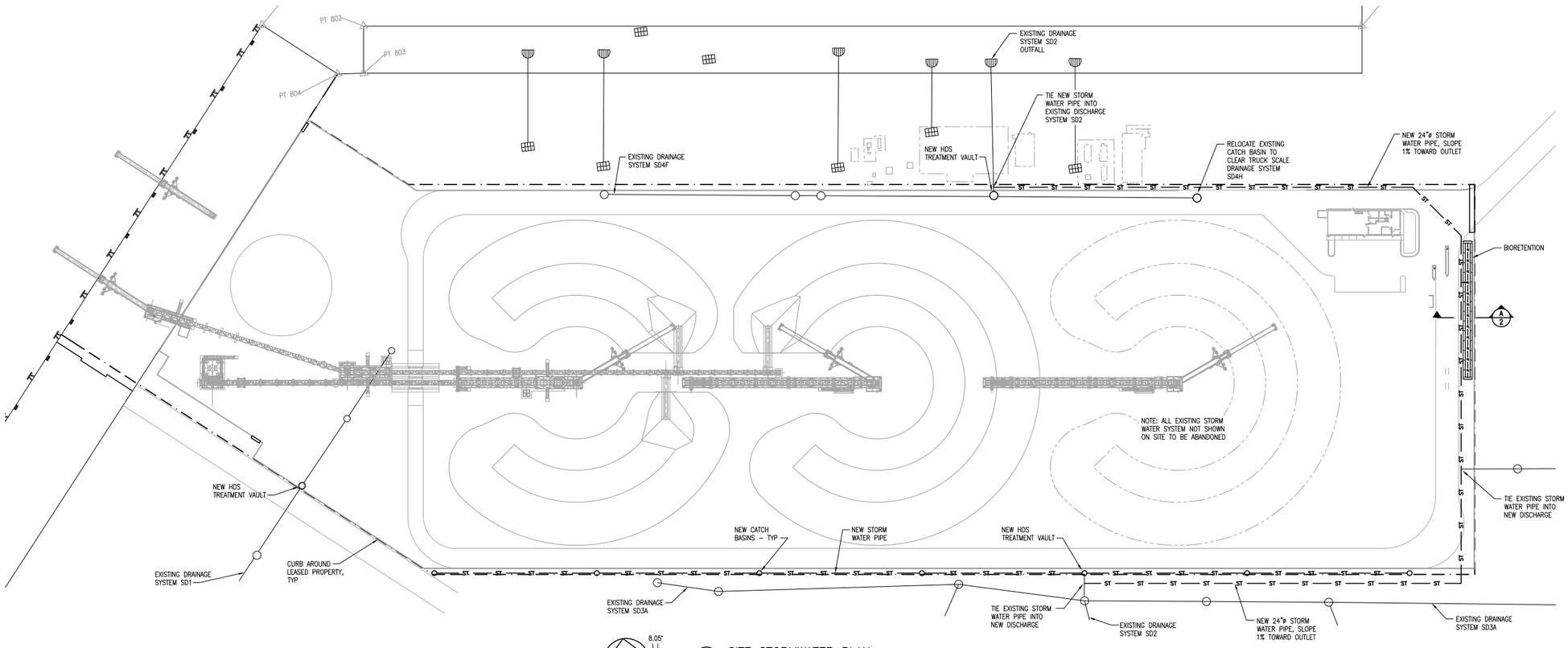


A/2 SECTION VIEW
1/2" = 1'-0"

BIORETENTION DESIGN PER THE 2015 PORT OF OAKLAND POST-CONSTRUCTION STORMWATER DESIGN MANUAL

STORMWATER NOTES:

EXISTING IMPERVIOUS AREA	= 785,000 SQ. FT.
POST-CONSTRUCTION IMPERVIOUS AREA	= 785,000 SQ. FT.
REDEVELOPED AREA	= 42,780 SQ. FT.
BIORETENTION DESIGN VOLUME, SDV_{ADJ}	= 3,000 CI. FT. = 22,450 GALLONS



1/2 SITE STORMWATER PLAN
1" = 60'-0"

PRELIMINARY

0 1 2
Miles

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Figure 2-8. Site Development Details – Stormwater Management

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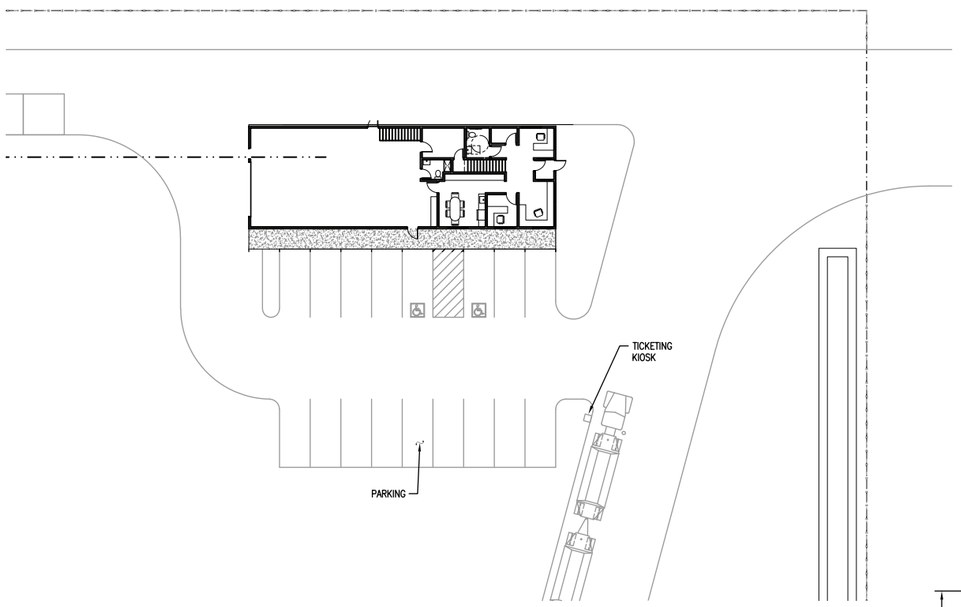
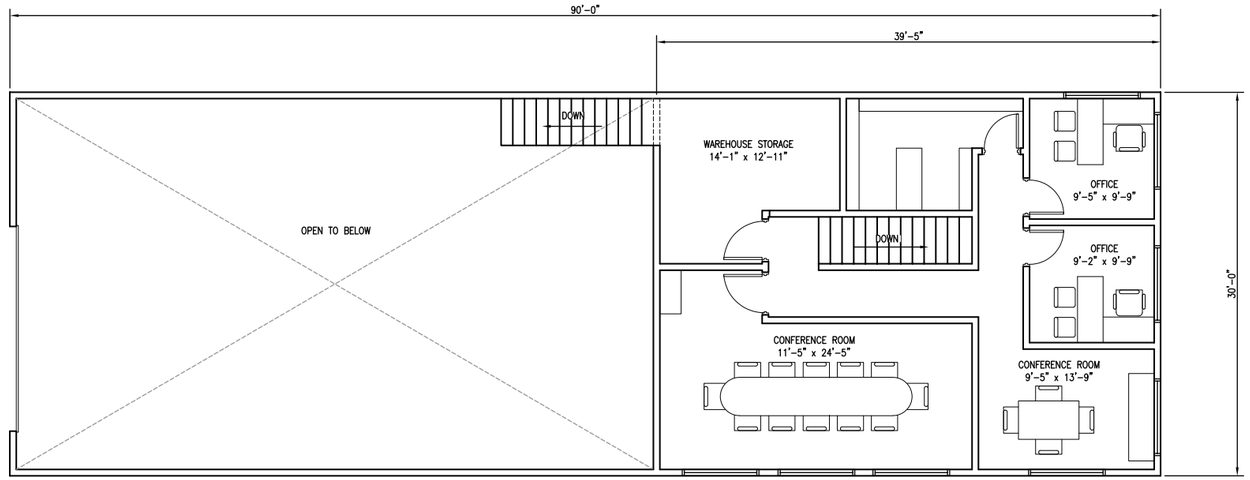
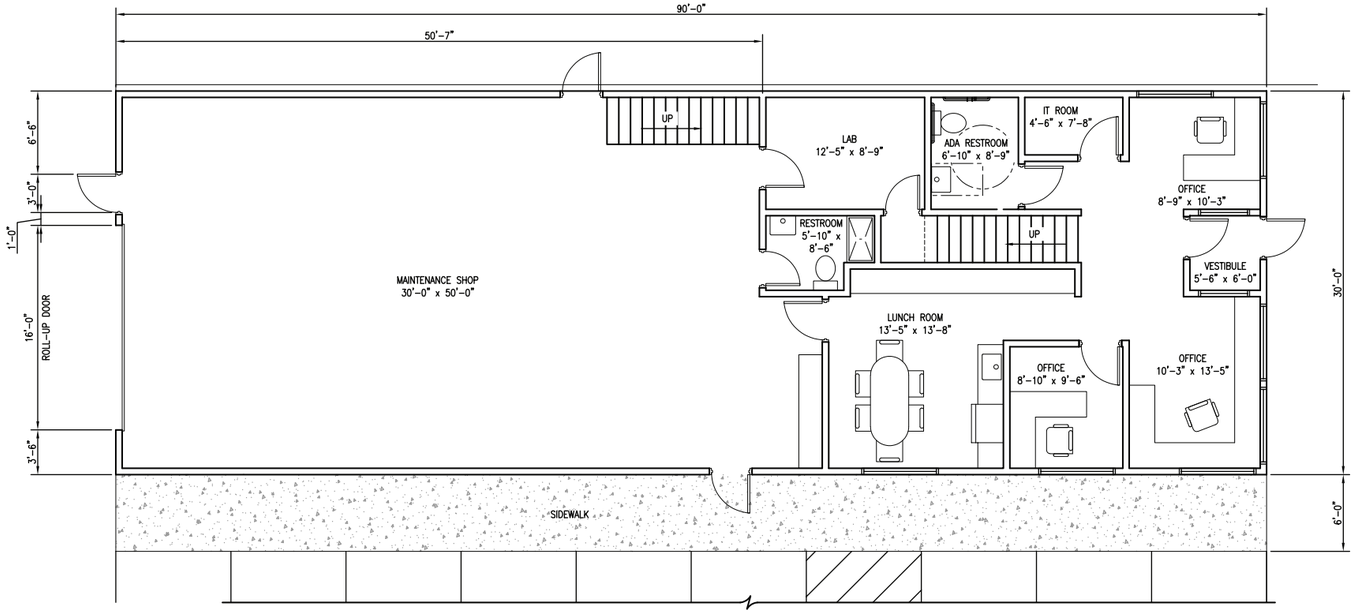


1/220 NEW MAINTENANCE/OFFICE BUILDING – ENLARGED PLAN
1" = 20'-0"



2/220 SECOND FLOOR LAYOUT
3/16" = 1'-0"



3/220 FIRST FLOOR LAYOUT
3/16" = 1'-0"

PRELIMINARY

Source: SMG 2020

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Figure 2-9. Site Development Details – Maintenance/Office Building Layout

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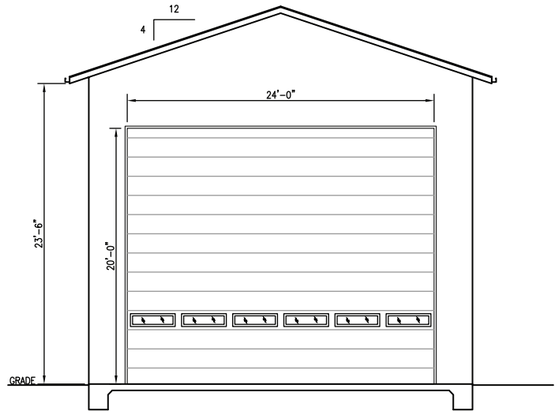
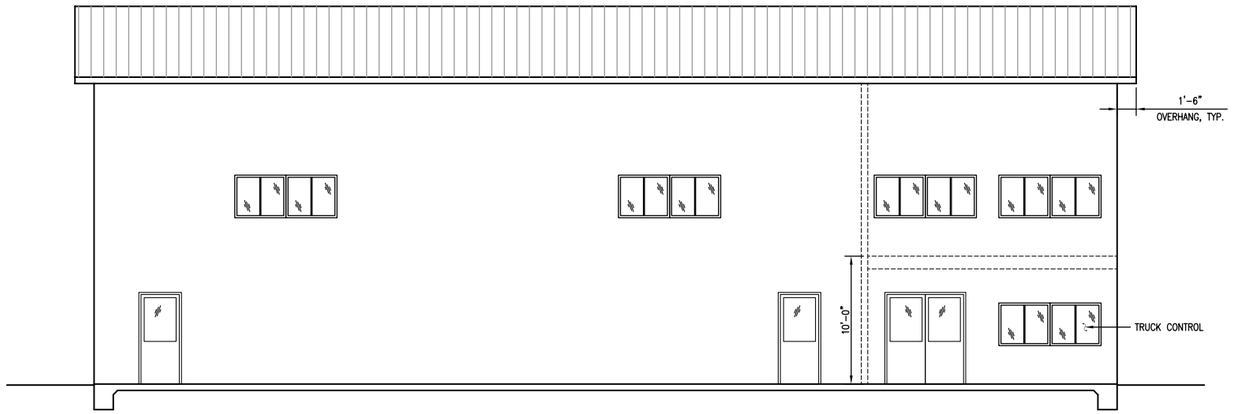
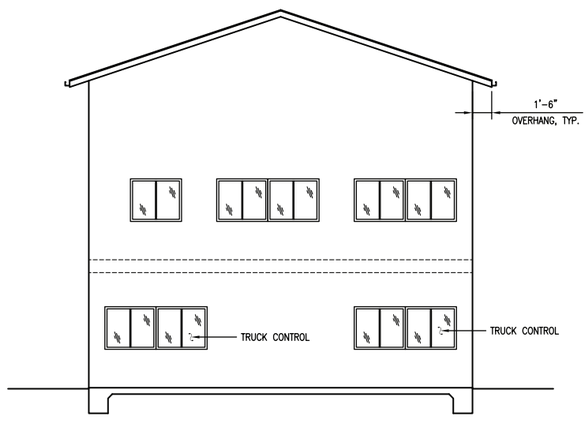


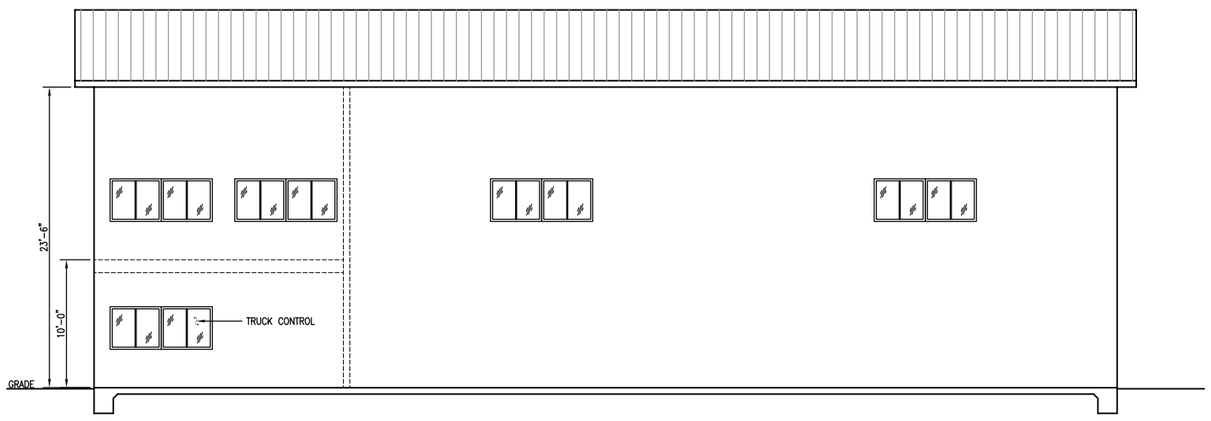
A/221 WEST ELEVATION
3/16" = 1'-0"



B/221 SOUTH ELEVATION
3/16" = 1'-0"



C/221 EAST ELEVATION
3/16" = 1'-0"



C/221 NORTH ELEVATION
3/16" = 1'-0"

Source: SMG 2020

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Figure 2-10. Site Development Details – Maintenance/Office Building Elevations

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RADIAL STACKING CONVEYOR SYSTEM

The radial stacking conveyor system would consist of a series of belt conveyors used to move construction aggregates from the ship unloading hopper to one of three 40-foot-tall radial construction aggregates storage stockpiles at the Project site, each with a total storage capacity of approximately ~~329,000~~350,000 tons (see Figures 2-5 and 2-6). The conveyance rate for construction aggregates handling would be approximately 5,500 tons per hour (tph). The conveyor system would include conveyor belts, electrical conduit, and light fixtures. In addition, water spray bars would be installed along the conveyor system at conveyor transfer points (when material is "dropped" from conveyors to stockpiles or from one conveyor to another conveyor/radial stacker) to maintain a consistent moisture content within the stockpiles between 1 percent and 8 percent depending on the aggregate size, and to suppress dust at transition points between conveyors. Conveyors would be heavy duty 60-inch-wide rubber belt conveyors and would be uncovered. Conveyors would be driven by electric motors and equipped with variable frequency drives (VFD) to allow for speed adjustments.

The radial stacker conveyor system would include feed conveyors that would be fixed in place and transport construction aggregates from point A to point B, and radial stackers, which are conveyors that are fixed at one end from which the stacker can pivot and rotate to either deliver construction aggregates to another feed conveyor or to a stockpile. Radial stackers can also telescope (elongate) and be raised or lowered, allowing this type of conveyor the flexibility necessary to deposit construction aggregates anywhere within the designated stockpile footprint.

The Proposed Project radial stacking conveyor system would include three feed conveyors and three radial stacker conveyors, described in detail below.

- **Feed Conveyor 1** would be a 450-foot-long conveyor that would carry construction aggregates from the ship unloading hopper up approximately 30 feet in elevation to the first radial stacker. Feed Conveyor 1 would be supported on steel trusses held up by steel support framing known as bents. The bents would connect the elevated trusses to the concrete foundation pile caps and steel pipe piles.

- **Radial Stacker 1** would be a 150-foot-long conveyor that would receive construction aggregates from Feed Conveyor 1 and either stack the construction aggregates in a radial-shaped stockpile or transfer the construction aggregates to the next conveyor, Feed Conveyor 2, for subsequent stockpiling in a different location. The radial stacker would be supported on steel trusses attached at its pivot point to a steel support structure, as well as by raised wheels and support framing on a radial concrete runway, thus allowing the stacker to pivot and rotate. The radial stacker would be elevated approximately 10 feet above the ground to allow the barge reclaim conveyor (described below) to pass below it.

- **Feed Conveyor 2** would be a 250-foot-long conveyor that would convey construction aggregates from Radial Stacker 1 up an additional 10 feet in elevation to feed into Radial Stacker 2. This conveyor would be elevated approximately 20 feet above the ground to clear the reclaim hopper and conveyor located underneath it. Feed Conveyor 2 would be supported on steel trusses held up by with steel support bents. The bents would connect the elevated trusses to the concrete foundation pile caps and steel pipe piles.

- **Radial Stacker 2** would receive construction aggregates from Feed Conveyor 2 and would either stack construction aggregates in a radial-shaped stockpile or transfer construction aggregates to the next conveyor, Feed Conveyor 3, for subsequent stockpiling in the last stockpile location. The characteristics of Radial Stacker 2 would be similar to those described above for Radial Stacker 1; however, this stacker would be located at grade.

- **Feed Conveyor 3** would be a 250-foot-long conveyor that would convey construction aggregates from Radial Stacker 2 to Radial Stacker 3. Feed Conveyor 3 would be supported on steel trusses held up by with steel support bents. The bents would connect the elevated trusses to the concrete foundation pile caps and steel pipe piles.

- **Radial Stacker 3** would receive construction aggregates from Feed Conveyor 3 and would stack construction aggregates in a radial-shaped stockpile. The characteristics of Radial Stacker 3 would be identical to those described above for Radial Stacker 2. This stacker also would be located at grade.

All fixed conveyors would have walkways on both sides for maintenance. Conveyors would be equipped with belt wipers to minimize product carryback. All conveyors would also be supplied with required safety controls such as emergency pullcord switches and interlocks from any conveyor to all previous conveyors. In addition, the conveyors would have normal control and feedback devices such as zero/slow speed detection, plugged chute detection, belt alignment switches, and motor amperage overload detection via the VFDs. The entire material handling system would be tied into a plant-wide Programable Logic Controller (PLC) that would control the offload conveyor system (e.g., detect control input and alarms, and facilitate controlled startup, shutdown, and emergency shutdown).

STOCKPILES

Once construction aggregates are offloaded from the OGV to the Oakland Marine Terminal, they would be conveyed to one of up to three stockpiles by the radial stacking conveyor system. All three stockpiles would be radial or horseshoe-shaped and would initially be between 20 and 25 feet in height, reaching heights up to 40 feet within a few years of operation. These stockpiles would be uncovered. At a height of 40 feet, the westernmost stockpile would have a capacity of ~~106~~102,000 tons, the central stockpile would have a capacity of ~~106~~126,000 tons, and the easternmost stockpile would have a capacity of ~~113~~122,000 tons. Screened fencing, stacked freight containers to create a perimeter container wall, or a combination thereof would be installed around the north, south, and east perimeter of the Project site for a total of approximately 3,540 linear feet to provide a visual barrier to site operations. The visual barrier would vary from approximately 8 feet to up to 45 feet in height. The visual barrier would be tapered down to approximately 8 feet at the Project site entrance. Screened fencing would be constructed consistent with local building codes. For the freight container section(s) of the visual barrier, concrete foundations would be constructed at each joint where the stacked freight containers meet. Each concrete foundation would be 12 feet by 8 feet in size supported by steel pipe piles.

BARGE RECLAIM SYSTEM

The barge reclaim system would allow construction aggregates to be transferred from onshore stockpiles to berthed barges. The reclaim system involves a barge reclaim hopper, three reclaim feeder conveyors, and ~~a~~ two barge loading radial stacker conveyors (see Figures 2-5 and 2-6). Reclaim conveyors would be similar to those described for the radial stacking system. Conveyors would be heavy duty 48-inch- or 60-inch-wide rubber belt conveyors and would be uncovered. Conveyors would be

driven by electric motors equipped with VFD to allow for speed adjustments. The barge reclaim system would also tie into the plant PLC. The reclaim conveyor belt system would have a throughput of 2,000 tph. The Peter Lind Barge, the Shamrock barges, and Rock Barge #2 (if needed) would receive ERA construction aggregates from the proposed stacker conveyor at Berth 22 or, on occasion, would be directly loaded from a berthed OGV.

The barge reclaim feeder system is described in detail below.

- A **Barge Reclaim Hopper** would be located at grade just east of the first radial stockpile and used to meter or feed construction aggregates onto Reclaim Feeder Conveyor 1. The hopper would be 20 feet by 9 feet with a capacity of 20 cy or 65,200 pounds. Front-end loaders would feed construction aggregates from the stockpiles into the Barge Reclaim Hopper.

- **Reclaim Feeder Conveyor 1** would be a 60-inch-wide, 55-foot-long conveyor that would carry construction aggregates from the Barge Reclaim Hopper up approximately 13 feet in elevation to feed Reclaim Conveyor 2. The conveyor would be of steel frame construction and located in an 8-foot-deep concrete pit (5 feet below grade) to maximize the headroom clearance above the hopper where bucket loaders would dump construction aggregates.

- **Reclaim Conveyor 2** would be a 48-inch-wide, 460-foot-long conveyor that would carry construction aggregates from the Reclaim Feeder Conveyor 1 up approximately 15 feet in elevation to feed Reclaim Conveyor 3. The conveyor would be of steel frame construction supported at grade with concrete railroad ties (or similar small concrete foundations) and short steel bents at the elevated end of the conveyor. The construction aggregates transfer point would have water sprayers attached for dust suppression.

- **Reclaim Feeder Conveyor 3** would be a 48-inch-wide, 310-foot-long conveyor that would carry construction aggregates from Reclaim Conveyor 2 up approximately 14 feet in elevation to feed the Barge Load Stacker Conveyor. The conveyor would be of steel frame construction supported at grade with concrete railroad ties and short steel bents at the elevated end of the conveyor. The construction aggregates transfer point would have water sprayers attached dust suppression.

- **The Barge Loading Radial Stacker Conveyor** would ~~be~~ consist of ~~a~~ two 150-foot-long radial telescoping stacker with 48” conveyor belts that would receive construction aggregates from Reclaim Feeder Conveyor 3 and transfer aggregates onto berthed barges. The Barge Loading Radial Stacker Conveyors would be supported on steel trusses attached at ~~its~~ pivot points on the dock to a steel support structure, thus allowing the stackers to pivot and rotate.

SCALE HOUSE AND ATTACHED EQUIPMENT MAINTENANCE BAY

A two-story, 3,000-square-foot pre-engineered metal scale house building would be located in the northeast corner of the Project site (see Figure 2-5). The scale house would be up to approximately 3,000 square feet with a maximum height of approximately 24 feet (see plan and profile depictions in Figures 2-9 and 2-10). The scale house would serve as an office ~~and scale house~~ and provide support rooms for staff to run the terminal and monitor the inbound and outbound truck scale traffic. Construction aggregates moisture testing also takes place in the scale house. The scale house would include an attached maintenance bay that could be accessed through a 16-foot-wide roll-up door where minor equipment repairs could be performed. Construction of a concrete slab foundation beneath the

scale house would be required. Typically, two (2) to three (3) personnel would be in the scale house building at any given time. This building would be the only building on the Project site.

TRUCK SCALES

An inbound truck scale would be located just west of the scale house to weigh trucks upon entry, and an outbound truck scale would be located just south of the scale house, shown in Figures 2-5 and 2-6 to verify the loaded weight of trucks before they leave the facility. The truck scales would be approximately 80 feet long and would be supported by concrete mat foundations. Ticketing kiosks would be located adjacent to each scale.

TRUCK TIRE WASH

At least one and up to two truck tire wash system(s) would be located immediately after the outbound truck scale to ensure that haul trucks do not track materials off the Project site and to further reduce dust generation on adjacent streets. Each truck wash system would be a self-contained system with side spray blasters and wash troughs with galvanized grates to capture and reuse wash water. Each tire wash water collection tank would hold a maximum of 9,000 gallons (for a total of 18,000 gallons) and would discharge to the sanitary sewer for wash water.

STORMWATER SYSTEM IMPROVEMENTS

The Proposed Project would manage and treat stormwater prior to it leaving the Project site through the use of engineered stormwater Best Management Practices (BMPs) in the storm drain system. The BMPs include a bioretention system~~, retention pond,~~ and hydrodynamic separator system~~s~~ (HDS) or other approved stormwater vault treatment system[13]). These stormwater improvement BMPs would treat runoff according to requirements in the NPDES Phase II MS4 Permit for redevelopment and the Port's Post-Construction Stormwater Design Manual (PCSDM), as well as aid future compliance with discharge requirements associated with the California Storm Water Industrial General Permit (IGP) anticipated to be required during Project operations.

To manage runoff ~~in the northern and southern portions of~~on the Project site, storm drain lines would be located along the northern and southern perimeter of the Project site. Both storm drain lines would use a subsurface HDS as a BMP, which would filter out sediment and other pollutants ~~prior to~~from site runoff (including runoff originating from aggregate piles) leaving the Project site. Following the HDS, runoff in the northern storm drain line would continue north and discharge to the Bay at an outfall located north of the Project site at Berth 21 and runoff in the southern storm drain line would be directed towards a 30-inch storm drain line that discharges to the Bay at an outfall located northeast of the Project site at Berth 10.

Additionally, a bioretention treatment basin (approximately 165 feet long ~~x~~by 6 feet wide; 990-square foot) would be located on the eastern side of the Project site to capture and treat stormwater from the eastern portion of the site. The bioretention treatment basin would be vegetated, consisting of mulch and planting media, overlain on a permeable layer such as gravel, overlain on drain rock with an impervious liner along the bottom. An underdrain would be located beneath the subsurface drainage

[13] Stormwater treatment system to follow Basic Treatment per the Washington Department of Ecology Technology Assessment Protocol – Ecology (TAPE): https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies.

layer with an overflow connection to an adjacent storm drainage pipe. Runoff would be conveyed to a 30-inch storm main east of the Project site and discharges to the Bay at an outfall northeast of the Project site at Berth 10.

Finally, ~~An~~ an 8-inch asphalt curb would be located around the entire boundary of the Project site to assist in water containment. Asphalt speed bump ramps would be installed at site access points to ensure containment is not compromised. ~~A rectangular stormwater retention pond (65 feet long by 45 feet wide) would be located on the southwestern portion of the Project site (see Figure 2-8) and would receive flows from a sub-drainage area in the vicinity of the storage tanks, feed conveyor, and truck overpass. The pond would be five feet deep with an impervious bottom and would have a storage capacity of 7,700 cubic feet or 57,600 gallons. The retention pond would be designed to capture Project site runoff from large storm events (e.g., 100-year storm) for a portion of the site that does not contain stockpiles and involves fewer industrial operations. The retention pond is a BMP that captures stormwater runoff for reuse and allows sediment to settle at the bottom of the pond, effectively acting as a pre-treatment for runoff to the overflow connection to the storm drain system. A Port standard maintenance agreement would apply to the Proposed Project to ensure that the retention pond is regularly inspected and maintained.~~

~~Additionally, the Applicant would notify vector control and comply with any preventative measures for vector control as part of operation and maintenance. Accumulated runoff would either evaporate, be pumped to one of 20 on-site water storage tanks on the north side of the Ship Unloading Hopper (each with a 10,000-gallon capacity), or overflow to the storm drain system.~~

WATER STORAGE FOR DUST CONTROL

An above ground steel water tank, approximately 125 feet in diameter and 12 feet high,~~The tanks~~ would be used to support dust control and maintenance of stockpile moisture levels that would be applied through water sprayers on the various conveyors. The~~se~~ tank~~s~~ would have a one-million-gallon capacity sustained by ~~also accept~~ pumped clean water from the self-unloading OGV aggregate holds (refer to Appendix G, *Ocean Going Vessel Hold Water Quality Analysis,* for OGV water quality data) and by EBMUD recycled water when needed.

~~Additionally, a bioretention treatment basin (approximately 165 feet long x 6 feet wide; 990-square foot) would be located on the eastern side of the Project site to capture and treat stormwater from the eastern portion of the site. The bioretention treatment basin would be vegetated, consisting of mulch and planting media, overlain on a permeable layer such as gravel, overlain on drain rock with an impervious liner along the bottom. An underdrain would be located beneath the subsurface drainage layer with an overflow connection to an adjacent storm drainage pipe. Runoff would be conveyed to a 30-inch storm main east of the Project site and discharges to the Bay at an outfall northeast of the Project site at Berth 10.~~

2.4.3 Offloading Process

Once a vessel is at berth, the self-offloading process would begin. During OGV offloading, the main engine would be shut down and auxiliary generators would be operated in order to provide power, heating, ventilation, and air conditioning to the OGV, similar to that described for existing operations.

The OGV self-unloading mechanism is contained on the OGV and is comprised of a series of conveyor belts and a telescoping discharge boom. Construction aggregates stored in the hull of the OGV would be conveyed above deck, onto the discharge boom, and then to the onshore ship unloading hopper. Offloading construction aggregates would occur at a maximum rate of 4,500 tph and would take approximately 24 hours per vessel.

Offloading of construction aggregates would require 65,000 gallons of water for dust control. Following the offloading of construction aggregates, remaining water in the OGV aggregate holds would be pumped into the water storage tank~~s~~ at the Project site. In 2019, OGVs arriving in the Bay carried an average of 144,608 gallons, totaling 6,073,770 gallons over the course of the year.

2.4.4 Material Storage

Stored construction aggregate stockpiles would be uncovered and maintained with a moisture content of one (1) to eight (8) percent depending on the material. This could require 8,000-10,000 gallons per day (~~GDP~~GPD) of water during warmer months (e.g., May-October) and approximately 5,000 GPD the remainder of the year. Water spray bars installed along the conveyor systems at conveyor transfer points would be used to maintain stockpile moisture levels and provide sufficient dust control during material storage and transfer. Stored water from the OGV ~~aggregate~~ ship holds would be used for material stockpile wetting and on-site dust control; thereby minimizing the need for supplemental recycled~~potable~~ water. OGV ship hold water as well as EBMUD recycled water ~~pumped water from the on-site stormwater retention pond~~ would be kept in the one-million-gallon~~twenty 10,000-gallon~~ on-site water storage tank~~s (total combined capacity of 200,000 gallons)~~.

2.4.5 Material Transport

Up to approximately 1,500,000 tpy of ERA construction aggregates would be transported from the Project site to end user facilities by haul truck. Up to approximately 1,500,000 tpy of ERA construction aggregates would be transported to facilities by barges. A description of proposed truck and barge operations is provided below. Regardless of the combination of transport type, no more than 2,500,000 tpy would be imported to the Project site.

TRUCK TRIPS AND OPERATION

Trucks traveling to or from the north would utilize West Grand Avenue to access Maritime Street, and trucks traveling to or from the south would utilize 7th Street to access I-880 (see Figure 2-11). This pattern would divert trucks away from the stretch of I-880 between 7th Street and West Grand Avenue and the associated Frontage Road. The Port would place signage at appropriate locations along the truck routes to indicate the required routes for aggregate trucks, and the Applicant would impose a three strikes rule to ban truck drivers from the Oakland Terminal if they do not adhere to the route restrictions.

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Horizon WATER and ENVIRONMENT

Prepared for:
Port of Oakland

N

0 500 1,000
Feet

- Facility Boundary
- Inbound Truck Route
- Outbound Truck Route
- Electric Truck Route
- No Trucks This Section of I-880

Figure 2-11
Truck Routes in Project Vicinity

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Haul trucks traveling to the Project site would be operated by private entities that are contracted by others, typically the entity purchasing the construction aggregates. Trucks would enter and exit the Project site from 17th Street just west of Maritime Street. Soon after entry, trucks would be weighed before following the counter-clockwise truck circulation route on-site. Front-end loaders would be used to load the trucks with construction aggregates. The trucks would then continue along the truck circulation route and be weighed prior to leaving the site in order to quantify the amount of material to be transported to end user facilities (e.g., concrete-ready mix plants) identified in Table 2.3-1 above under existing operations and other end-user locations. Trucks leaving the Project site with construction aggregates would be uncovered and in compliance with California Vehicle Code Section 23114. However, electric trucks with covered loads would be used to transport construction aggregates to the Central Concrete plant located on Peralta Street in the West Oakland community. Charging stations for these trucks would either be at the Project site or at the concrete plant. Four trucks would be deployed within 24 months of the effective date of the Port's lease with ERA and any future trucks serving the Central Concrete plant from the Proposed Project would also be electric and covered, or other Port-approved alternative technology.

Under typical operating conditions, approximately up to 375 haul trucks would enter, load, weigh-in, and exit in a day. The volume of truck trips tends to be lower between November and February, and highest between June and October. The Proposed Project anticipates having 70,000 truck trips per year to transport up to 1.5 million tons of construction aggregates. Based on current ERA end-user facilities, the average round trip for a haul truck would be 27 miles.

For efficient operations and to minimize the queuing and truck idling times, three front-end loaders would be available to load trucks. Each truck would be loaded with between 1-2 loaders dependent on truck configuration. At peak operation it is expected that one truck could be loaded in approximately 2 minutes. Upon completion, trucks would be weighed again and exit the Project site.

If needed, trucks would primarily stage within the Project site or between the Project site and the driveway at 17th Street. An estimated 60 trucks could be staged within the Project site itself and another 10 between the site and driveway at 17th Street, prior to any queuing onto Maritime Street.

Trucks servicing the Proposed Project would comply with the Port's Comprehensive Truck Management Program (2009), including without limitation the Port Registry and the Drayage Truck Ban. The Port's Secure Truck Enrollment Program (STEP) requires trucks entering marine terminals to meet the Port's security requirements, including enrollment in STEP. The Drayage Truck Ban requires trucks to be in compliance with the California Air Resources Board (CARB) Drayage Truck Regulation component is consistent with CARB Drayage Truck Regulation (Title 13 of the California Code of Regulations [CCR], Section 2027) and requires the Seaport Facility operators to take certain actions to enforce the Drayage Truck Ban (refer to Port Tariff 2A, Items 2400-2415).

BARGE TRIPS AND OPERATION

Barges would be transported to the Project site by tugs and berthed during loading. Construction aggregates would be loaded from the stockpiles at the Project site onto barges via the barge reclaim system. On occasion, barges may be directly loaded from a berthed OGV, if both are present at the same time. Once the barges are loaded with material, the barges would be transported by tug to other locations such as Pier 92 in San Francisco and the Shamrock Plant in Petaluma (see Figure 2-4). Refer to the discussion under "Barge Reclaim System" above for more details.

2.4.6 Operational Workforce and Equipment

Operation of the Proposed Project at peak hourly throughput would require eight full-time employees, including three equipment operators (e.g., front-end loaders), two maintenance staff, a weigh master, and two on-site site managers. When a vessel is at berth, four additional longshore workers would be required to unload the vessel. In the event of a daytime offload, up to three additional ERA employees may be required to support truck loading. Employees would access the site from 17th Street/Maritime Street. Fifteen parking spaces and an additional two handicapped parking spots would be provided in front of the scale house on-site. Longshore workers would park at the berth.

The Project's three front end loaders would be hybrid electric and meet USEPA Tier 4 Final standards. The Project's sweeper, skid steer loader, and personnel lift would be electric powered.~~All off-road equipment would utilize at least Tier 4 Final engines in accordance with CARB Cargo Handling Equipment Regulation.~~

OPERATIONAL HOURS

Typically, the Project site would be operational for truck loading for 9 hours per day, from 5:00 a.m. to 2:00 p.m., 5 days per week, with occasional weekend work. Vessel offloading could occur at any time, 7 days per week, and would be triggered by the arrival of OGVs. During vessel offloading or during peak demand periods, the Project site could load trucks for 24 hours per day, 7 days per week in order to meet the demand of construction projects requiring construction aggregates. Project operation would occur year-round.

2.4.7 Project Site Maintenance

Site maintenance would focus on the condition of asphalt paving and the functionality of dust control water sprayers and stormwater treatment features. The condition of all paving on the Project site, including the perimeter asphalt curb and asphalt ramps, would be inspected annually by ERA and patched or repaired as needed. All repair work would comply with applicable permit regulations. The stormwater collection system would be inspected prior to October 15 every year and throughout each winter storm season to ensure good condition and proper function of the HDS, bioretention treatment basin, and stormwater retention basin (e.g., removal of accumulated sediments, replacement of dead plant materials). Good housekeeping practices would also be implemented as part of compliance with regulatory permits and PM; see Section 3.8, "Hydrology and Water Quality," for more information.

Additionally, the Proposed Project would require approximately 65,000 gallons of water for dust control during offloading of construction aggregates from each OGV. An additional, 8,000 to 10,000 GPD would be required during warmer months (e.g., May-October) and approximately 5,000 ~~gallons per week~~ GPD during the rest of the year to maintain stockpile moisture levels and provide dust control during material storage and transfer. This water would primarily be sourced from pumped water from the self-unloading OGV aggregate holds. OGV ~~aggregate~~ hold water would be stored in an on-site~~20~~ water storage tank~~s, each~~ with a one-million-~~10,000~~ gallon capacity, on the north side of the Ship Unloading Hopper. ~~Additionally, accumulated stormwater runoff (i.e., "reused" water) from the site's stormwater retention pond, which would hold approximately 57,600 gallons, would also be collected and stored in these tanks for the same purpose.~~

In addition, settling and compaction of the Project site are anticipated to occur over the life of ERA's operations due to the weight of the stockpiled construction aggregates. When necessary, to maintain safe operations and truck circulation, ERA would backfill compacted areas to reestablish existing grades. The Port would also conduct surveys periodically for site settling and alignment to monitor site compaction.

2.4.8 Potential Future Use of Berths 20 and 21

The lease agreement includes the flexibility to relocate OGV offloading and barge reclaim processes to Berths 20 and 21 in the event that the Port determines that Berth 22 is needed for expanded container operations. The details of this circumstance, including effects on facility layout and operations, are not known at this time. Should use of Berths 20 and 21 become necessary in the future, such use would be subject to additional environmental review consistent with CEQA, as necessary.

2.5 PROJECT CONSTRUCTION

Construction activities would include demolition, site preparation and grading, construction of Project components, and paving. The weight of the construction aggregates stored at the Project site would result in compaction and settlement of portions of the site outside of the area where piles are installed as part of conveyor structure foundations; thus, site restoration activities at the end of the Proposed Project life are considered as a phase of Project construction. No in-water work would be required during construction of the Proposed Project and no off-site staging would be needed.

2.5.1 Schedule

Construction of the Proposed Project is anticipated to take approximately 9-12 months. Construction is anticipated to begin in ~~June~~ late 2021 and end ~~by May~~in late 2022.

CONSTRUCTION HOURS

Construction would generally occur between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday. Construction material delivery by barges to the site may occur. Barges would be unloaded at any time on any day of the week during the construction period. Up to six barge deliveries are assumed for the purposes of environmental analysis. Aside from material delivery, any other construction activities proposed to occur outside of the standard hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday would be evaluated and approved by the Port on a case-by-case basis.

2.5.2 Demolition

Demolition activities would include capping existing utilities (i.e., electric, lighting, water supply and fire hydrants, storm drain lines, and catch basins) where conflicts with Proposed Project facilities exist and the cutting and removal of sections of asphalt paving. As part of the building permit process, ERA would prepare a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for review and approval that would minimize waste diverted to the landfill.

2.5.3 Site Preparation and Grading

Site preparation would include constructing ramps for accessing the Project site from non-compacted areas, installing a perimeter security fence and security lights, and grading/installation and or rerouting of new utilities. This construction phase would also include grading of the ~~stormwater retention pond and the~~ bioretention treatment basin and truck tire wash system(s).

2.5.4 Construction of Project Components

Following site preparation and grading, the various Project components would be installed, including: vibratory pile driving of between 278 and 446 piles (the higher number reflects installation of perimeter container wall), installation of concrete foundations, placement of perimeter containers and/or fencing, ~~constructing~~ construction of the ~~retention and~~ bioretention ~~facilities~~facility, ~~installing~~ installation of HDS vault filters, truck tire wash system(s), and erecting structures (e.g., conveyors and scale house).

Existing electric infrastructure that crosses the Project site would be relocated in a new underground electrical feed to continue to support existing electrical services in the area along with the Proposed Project facilities, conveyor systems, and associated lighting.

2.5.5 Paving

Any disturbed or damaged asphalt paving within the Project site would be patch repaired as necessary at the end of construction activity to match the existing grade.

2.5.6 Stormwater Management During Construction

The Proposed Project would disturb approximately ~~42,780~~39,855 square feet or ~~0.98~~ 0.91 acre during construction. This project disturbance does not trigger the need to apply for a Construction General Permit with the State Water Resources Control Board (SWRCB); however, it would require the development of a Small Project Storm Water Pollution Prevention Plan (SWPPP) under the Port Development Permit. The construction contractor would implement the Small Project SWPPP during construction, which would include requirements for inspections and monitoring, BMPs, and requirements to revise the Small Project SWPPP and implement revisions as needed to protect stormwater quality. BMPs to be implemented during construction may include, but are not limited to, fiber rolls or other sediment controls, wind erosion control, stabilized construction entrances/exits, and non-stormwater and waste management.

2.5.7 Construction Workforce and Equipment

On average, a total of 15 construction workers per day would be on-site during Proposed Project construction. The equipment required for each construction activity is presented in **Table 2.5-1** below. The Proposed Project would meet all applicable air quality regulations and control measures for mobile and stationary sources included in the BAAQMD 2017 Clean Air Plan (CAP) for described in Section 3.~~3~~4, "Air Quality."

Table 2.5-1. Construction Sequencing and Required Construction Equipment

Phase	Phase and Activities	Approx. Duration (months)	Number of Workers	Equipment Type (Quantity)
Demolition	▪ Cap & Remove or Abandon Utilities	1	10	Excavator/backhoe (2) Dump truck (1)
Site Preparation and Grading	▪ Install Perimeter Visual Barrier and Security Lighting ▪ Install New Utilities including Vault-Type HDS ~~filters~~ Filters ▪ Grade ~~Retention Pond and~~ Bioretention Treatment Basin~~,~~ and Truck Tire Wash System(s)	1	10	Excavator/backhoe (2) Trencher (1) Forklift (1) Dump truck (1) Dozer (1) Water Truck (1)
Construction of Project Components	▪ Foundation Piles ▪ Concrete Forming and Pouring ▪ Construct ~~Retention Pond and~~ Bioretention Treatment Basin	3	20	Pile driver (vibratory) (2) Roller (1) Dump truck (1) Concrete truck (2) Concrete saw (2) Loader/backhoe (2) Water truck (1) Welder (10 Generator (1)
Construction of Project Components	▪ Structure and Perimeter Container Erection ▪ Assembly of Water Tank and Truck Tire Wash System(s)	**5**	**20**	Crane (2) Scissor lift (4) Forklift (2) Welder (1) Generator (1)
Paving	▪ Asphalt Patch	**1**	**10**	Asphalt paver (1) Roller (1)
Finishing	▪ Commissioning and start-up	**1**	**10**	Scissor lift (2) Forklift (2) Welder (1) Generator (1)

2.5.8 Water Use

Water would be primarily used for dust control during earthwork and for fire suppression during construction. Approximately 200,000 gallons of water are estimated to be required. Water would be provided from East Bay Municipal Utility District (EBMUD) and conveyed to the site via water tank trucks.

2.5.9 Energy Use

Electrical power would be required to operate construction equipment and supporting infrastructure (e.g., security lighting). The electric power needed for Project construction would be provided by existing Port power connections. Diesel generators may also be used to power tools and smaller pieces of equipment.

2.5.10 Materials and Construction Waste Management

Project construction would generate waste materials consisting of asphalt and fill soil. Approximately 14 percent of construction waste (asphalt) would be diverted to a recycler for reuse and the remainder (soil) would be taken to the landfill. All other construction debris would be removed from the Project site and recycled or otherwise disposed of off-site. Required construction materials would include structural fill and concrete. Approximate quantities and associated haul trips are listed in **Table 2.5-2**.

Table 2.5-2. Estimated Construction Material Quantities and Haul Trips

Material	Estimated Quantity	Haul Trips
Asphalt Pavement Construction Waste (to landfill/to recycling)[1]	~~1,000~~800 cy	~~100~~80 (10-yard truck)
Soil Construction Waste (to landfill)	~~6,000~~1,700 cy	~~600~~170 (10-yard truck)
Structural Fill	~~3,000~~4,000 cy	~~300~~400 (10-yard trucks)
Structural Concrete	~~3,500~~1,600 cy	~~400~~160 (~~9~~10-yard trucks)
Steel and Equipment	---	100

1. Asphalt pavement removed as part of the Project would be crushed and reused to the extent possible consistent with the City's Construction Demolition and Debris Ordinance. ERA would prepare a Construction and Demolition WRRP) for review and approval that would minimize waste diverted to the landfill.

2.6 END-OF-LEASE SITE RESTORATION

At the end of the lease with the Port, ERA would remove all aggregates-related infrastructure and the Project site would be restored to the same or better condition. Work required to restore the site may include, but would not be limited to: (i) demolition of any improvements constructed by ERA; (ii) restoration of any soil settlement or other impacts; (iii) restoration of any utilities that were cut, capped, or relocated; (iv) restoration of light poles and fixtures that were demolished; and (iv) construction of asphalt pavement. Areas of the Project site that have settled during the life of the Project would be filled with ERA construction aggregates or other acceptable material and recompacted to restore the site to the pre-Project grade. This would be followed by asphalt repaving of all disturbed areas. It is estimated that 200,000-300,000 square feet of asphalt repaving would be required. The Project site would be returned to the Port at pre-lease conditions in compliance with regulatory requirements at the time of restoration.

2.7 REQUIRED APPROVALS

Table 2.7-1 provides a list of required approvals, applicable permits, and consultations that are expected to be required for the Proposed Project by permitting agency.

Table 2.7-1. Proposed Project Regulatory Permits and Approvals

Agency	Permit / Approval / Consultation
San Francisco Bay Conservation and Development Commission	New Permit/Permit Amendment
Bay Area Air Quality Management District	Authority to Construct and Permit to Operate
San Francisco Bay Regional Water Quality Control Board	Industrial General Permit
East Bay Municipal Utility District	EBMUD Discharge -Permit (for Tire Wash System[s])
Port of Oakland	Post-Construction Stormwater Management Plan Approval (compliance under Port's Phase II MS4 Permit)
Port of Oakland	Development Permit
City of Oakland	Building Permit
City of Oakland	Grading Permit

Chapter 3
Environmental Analysis

3.1 INTRODUCTION TO ENVIRONMENTAL ANALYSIS

This chapter describes the environmental resources and potential environmental impacts of the Proposed Project. Section 3.2, "Environmental Topics Adequately Addressed in the 2002 EIR as Addended," summarizes those resource areas that were not analyzed further in this ~~Draft~~ Final SEIR. For each of the remaining resource areas, Sections 3.3 through 3.12 summarize the existing environmental setting; provide updates to the regulatory setting since the 2012 Addendum was prepared; and summarize prior analysis for the OAB Area Redevelopment Plan that may be applicable to the Proposed Project for that particular resource topic. Each section analyzes potential impacts from the Proposed Project and identifies mitigation measures to reduce, where possible, any adverse effects from potentially significant impacts. Each of these resource sections includes a summary table listing applicable significance criteria, impact summary, and whether the impact has changed compared to the 2002 EIR as Addended.

The 2002 EIR as Addended includes adopted SCA that are also applicable to the Proposed Project. The SCA serve to avoid or substantially reduce potentially significant impacts. The City adopted and regularly updates SCA that are applicable to all development projects within the City's jurisdiction regardless of a project's environmental determination, pursuant in part to CEQA Guidelines Section 15183.10. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The Port Area is outside the jurisdiction to which the SCA apply. However, the Port has committed to implementing applicable SCA from the adopted 2012 SCA/MMRP for its projects completed as part of the OAB Area Redevelopment Plan. Where applicable, the SCA are incorporated and required as part of the Proposed Project and, therefore, are not listed as mitigation measures but would be included in the SCA/MMRP for the Proposed Project.

As described in Chapter 1, *Introduction*, the 2002 EIR as Addended analyzed the development and use of the Port for increased cargo operations, assuming only container cargo. The Proposed Project would change a portion of a terminal from planned container cargo to bulk construction aggregates. However, in accordance with CEQA Guidelines Section 15125, the existing physical environmental conditions were used as the baseline conditions for evaluating impacts of the Proposed Project.

3.1.1 Baseline Environmental Conditions

The Project site includes Berth 22, and approximately 18 acres of backlands behind and adjacent to Berths 20, 21, and 22 in the OAB Area Redevelopment Plan Area. The western and northern perimeters of the Project site are situated along Oakland's Outer Harbor, which is part of Central San Francisco Bay. The Project site is developed and fully paved, consisting of a former marine container terminal that is currently used on an interim basis for AMS (i.e., overnight truck and month-to-month parking and shipping container/chassis storage/staging) to support Port maritime activities.

3.1.2 Significance of Environmental Impacts

According to the CEQA statutes and guidelines, an EIR should define the threshold of significance and explain the criteria used to determine whether an impact is above or below that threshold. For each environmental resource topic, significance criteria are identified to determine whether implementation of the Proposed Project would result in a significant environmental impact when evaluated against the baseline condition, as described in the environmental setting. The significance criteria vary depending on the environmental resource topic. In general, effects can be either significant or potentially significant (exceed the threshold) or less than significant (do not exceed the threshold). A significant impact will be identified as significant and unavoidable if no feasible mitigation measures are available that would reduce the impact to a less-than-significant level.

For the Proposed Project, the Port has evaluated whether impacts would result in new significant impacts not identified in the 2002 EIR as Addended for the OAB Area Redevelopment Plan; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to Project changes, changes in setting, or new information.

3.2 Environmental Topics Adequately Addressed in the 2002 EIR as Addended

The following resource topics are considered to be adequately evaluated in the 2002 EIR as Addended and are not evaluated further in this ~~Draft~~ Final SEIR. A brief summary of why these resource topics have not been further reviewed is provided.

3.2.1 Agriculture

The Proposed Project is located within the Port's Outer Harbor, a highly urbanized area with no existing agricultural production. No Prime Farmland or Farmland of Statewide or Local Importance is designated in the City or surrounding area, including the Project site (California Department of Conservation [CDOC] 2016). No land under Williamson Act contract is located on or near the Project site CDOC 2015). Finally, no agricultural resources currently exist on the Project site and the Proposed Project would continue to be designated as urban and built-up land, as defined by the CDOC (2016). Therefore, impacts and mitigation measures related to this environmental topic would be the same as disclosed in the 2002 EIR as Addended and are not discussed further.

3.2.2 Biological Resources

The Proposed Project site is situated immediately along the Outer Harbor and adjacent to the Bay. The Project site is a completely developed site and does not provide suitable habitat for plants or wildlife species. No riparian habitat or other sensitive community types occur within the Project site, as it does not support vegetation. Sensitive communities in the vicinity of the Project site include estuarine and marine wetlands north of the Bay Bridge Toll Plaza; however, no impacts are anticipated as these habitat types are physically separated from the Project site by Interstate 80. Likewise, no indications of federal- or state-protected wetlands or waters of the U.S. were observed in the Project site. While the San Francisco Bay Estuary and associated habitats are considered an important wildlife movement

corridor for waterfowl and shorebirds, Proposed Project activities would not alter the surrounding area as construction and operation are confined to the existing developed area.

Stormwater runoff on the Project site would either be ~~collected in a retention pond for reuse on-site,~~ filtered through a bioretention treatment basin~~,~~ or treated with HDS vault filters (or other approved stormwater vault treatment system[14]) prior to off-site discharge into storm drains and the Bay. Stormwater runoff and associated water quality issues are discussed in Section 3.8, "Hydrology and Water Quality." As discussed there, impacts to water quality would be less than significant. Therefore, impacts and mitigation measures related to biological resources would be the same as disclosed in the 2002 EIR as Addended and are not discussed further.

The following biological resources SCA would apply to the Proposed Project:

- **SCA BIO-5: Regulatory Permits and Authorizations:** Prior to construction in or near the water, the project applicant shall obtain all necessary regulatory permits and authorizations, including without limitation, from the U.S. Army Corps of Engineers (USACE), RWQCB, BCDC and the City, and shall comply with all conditions issued by applicable agencies. Required permit approvals and certifications may include, but not be limited to the following:

  a) USACE: Section 404. Permit approval from the Corps shall be obtained for the placement of dredge or fill material in Waters of the U.S., if any, within the interior of the project site, pursuant to Section 404 of the federal Clean Water Act (CWA).

  b) RWQCB: Section 401 Water Quality Certification. Certification that the project will not violate state water quality standards is required before the Corps can issue a 404 permit, above.

  c) BCDC approvals.

  (*Note: The Port has a USACE Section 404 Permit and a RWQCB Section 401 Water Quality Certification that would cover the Proposed Project activities.*)

3.2.3 Cultural Resources

The Proposed Project site is underlain by artificial fill consisting of sand, gravel, and clayey materials, eliminating the likelihood of encountering sub-surface cultural resources during construction activities. Additionally, the 2002 EIR as Addended concluded that no archaeological resources were located within the Project site and the discovery of human remains would be unlikely. Further, no built-environment historic resources currently exist on the Project site. Therefore, impacts and mitigation measures related to this environmental topic would be the same as disclosed in the 2002 EIR as Addended and are not discussed further.

Although sub-surface cultural resources are unlikely, the following SCA would apply to the Proposed Project:

[14] Stormwater treatment system to follow Basic Treatment per the Washington Department of Ecology Technology Assessment Protocol – Ecology (TAPE): https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies.

- **SCA CULT-1: Archaeological Resources:**

  a) Pursuant to CEQA Guidelines section 15064.5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.

  b) In considering any suggested measure proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the project applicant shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while measure for historical resources or unique archaeological resources is carried out.

  c) Should an archaeological artifact or feature be discovered on-site during project construction, all activities within a 50-foot radius of the find would be halted until the findings can be fully investigated by a qualified archaeologist to evaluate the find and assess the significance of the find according to the CEQA definition of a historical or unique archaeological resource. If the deposit is determined to be significant, the project applicant and the qualified archaeologist shall meet to determine the appropriate avoidance measures or other appropriate measure, subject to approval by the City, which shall assure implementation of appropriate measure measures recommended by the archaeologist. Should archaeologically-significant materials be recovered, the qualified archaeologist shall recommend appropriate analysis and treatment, and shall prepare a report on the findings for submittal to the Northwest Information Center.

  d) Require storage (curation) of recovered materials, such as artifacts and soil samples, and records generated by an archaeological study in a facility that allows access to the materials.

- **SCA CULT-2: Human Remains:** In the event that human skeletal remains are uncovered at the project site during construction or ground-breaking activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the NAHC, pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

- **SCA CULT-3: Paleontological Resources:** In the event of an unanticipated discovery of a paleontological resource during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards 1995, 1996). The qualified paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in Section 15064.5 of the CEQA Guidelines. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The plan shall be submitted to the City for review and approval.

3.2.4 Mineral Resources

The Project site is not identified as a locally important mineral recovery site and is not adjacent to any active mines. The Project site is located in the City's urban limits where land use is incompatible with mining. Regardless, construction activities associated with the Proposed Project would not occur in a way that would interfere with mineral recovery. The Proposed Project would have no impact on the availability or recovery of a known or locally important mineral resource. Therefore, impacts and mitigation measures related to this environmental topic would be the same as disclosed in the 2002 EIR as Addended and are not discussed further.

3.2.5 Population/Housing

The Proposed Project would not involve any activities that would directly increase population growth or result in the construction of any housing. On average, construction of the Proposed Project would only require 15 workers daily for 9-12 months, and it is expected that the local or regional labor force would be sufficient to meet construction demand. While some construction workers could temporarily relocate from other areas, the increase in new workers would be considered insignificant contributor to housing demand. Once in operation, the Proposed Project would require eight full-time workers and it is expected that these positions would also be filled by the local or regional labor force. As a result, the Proposed Project would not result in the need to construct replacement housing elsewhere for displaced people or housing. Therefore, impacts and mitigation measures related to this environmental topic would be the same as disclosed in the 2002 EIR as Addended and are not analyzed further.

3.2.6 Public Services

The Proposed Project would be located in the Port's Outer Harbor and would require 15 workers daily during construction and 8 workers during operation. As such, it would not increase demand for public services, such as fire protection, police protection, schools, parks, or other public facilities. As the Proposed Project would not increase population, it also would not adversely affect service ratios, response times, or other performance objectives, such as to require the provision of new or physically altered governmental facilities (e.g., new police or fire station), the construction of which could have adverse environmental impacts. Therefore, impacts and mitigation measures related to this environmental topic would be the same as disclosed in the 2002 EIR as Addended and are not discussed further.

3.2.7 Recreation

The Proposed Project would not include any recreational facilities or require the construction or expansion of recreational facilities. As described above, the Proposed Project would not result in increased population that could in turn increase demands on, or use of, existing recreational facilities. The location of the Proposed Project in a highly urban and industrial area would have no potential to directly impact existing recreational facilities. The closest recreational facilities are Mclaughlin East Shore Park (approximately 0.5 mile north of the Project site), Raimondi Park (approximately 0.7 mile east of the Project site), and Middle Harbor Shoreline Park (approximately 1 mile southwest of the Project site). Therefore, impacts and mitigation measures related to this environmental topic would be the same as disclosed in the 2002 EIR as Addended and are not discussed further.

3.3 AESTHETICS

This section identifies potential aesthetic impacts of the Proposed Project; evaluates whether the Proposed Project would result in new significant aesthetic resource impacts not identified in the 2002 EIR as Addended for the OAB Area Redevelopment Plan; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to Project changes, changes in setting, or new information. Previously identified mitigation measures and SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

3.3.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

No updated regulations relevant to aesthetics have occurred since the 2012 Addendum.

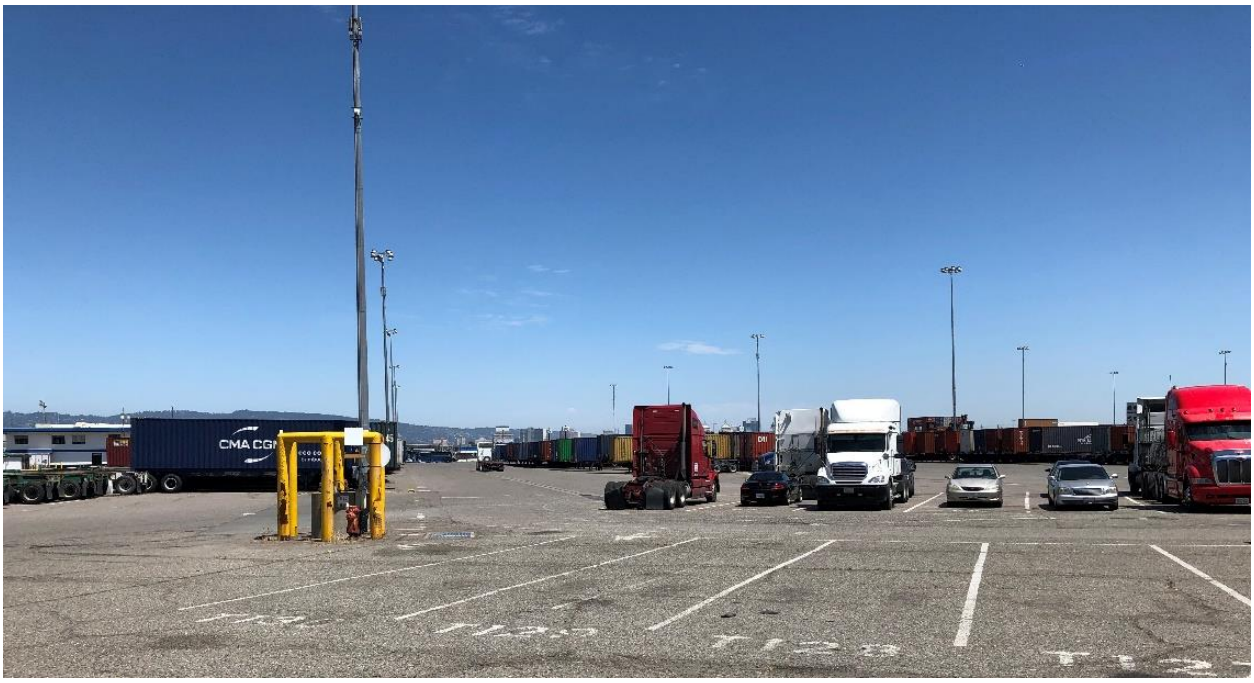
UPDATED ENVIRONMENTAL SETTING

The Project site is located at the Port's OHT in the Maritime sub-district described in the 2002 EIR as Addended. The Maritime sub-district and surrounding vicinity is highly industrialized, consisting primarily of marine terminals and associated uses with no natural features.

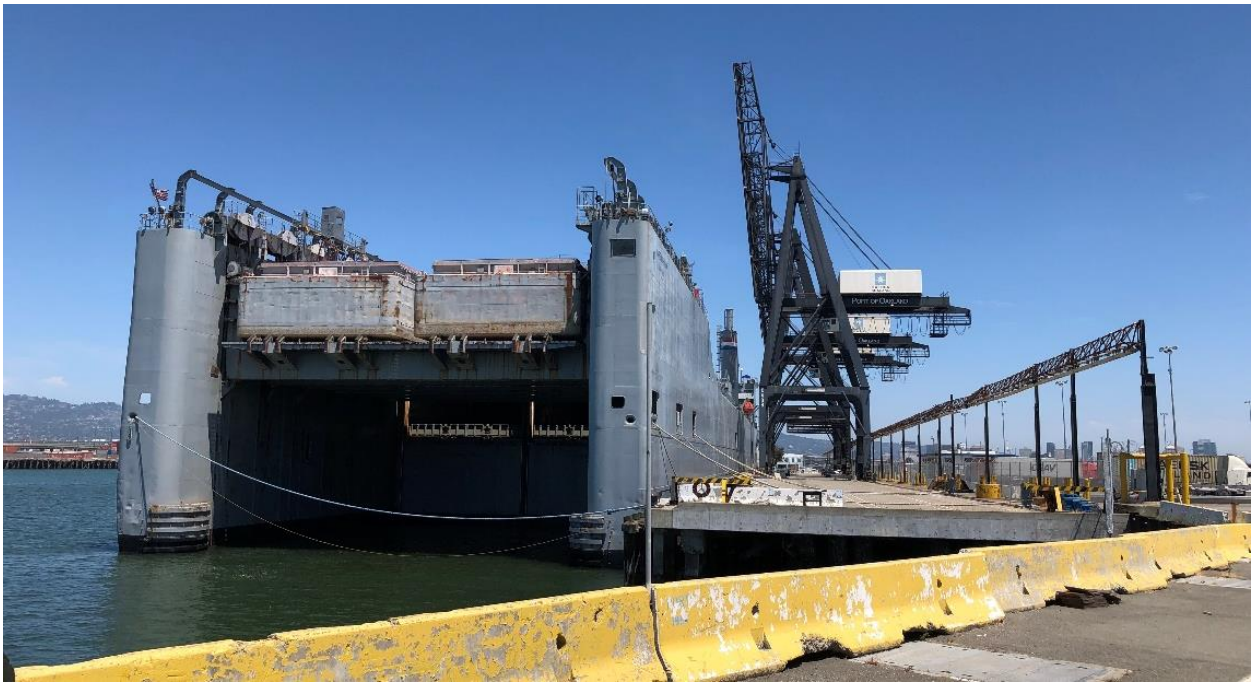
As shown in Figure 2-2 of Chapter 2, *Project Description,* the Project site is developed and fully paved, consisting of a former marine container terminal that is currently used on an interim basis for AMS (i.e., overnight truck and month-to-month parking and shipping container/chassis storage/staging) to support Port maritime activities. Photographs of the existing conditions at the Project site are shown in **Figure 3.3-1** below. The physical environmental setting at the Project site and immediate vicinity as described in the 2002 EIR as Addended remains accurate; no relevant changes to the environmental setting have occurred since the 2012 Addendum. The Port and the City have continued to develop the surrounding area in a manner consistent with the 2002 EIR as Addended.

The closest residential area is located approximately one-half mile to the southeast of the Project site in the Prescott neighborhood of West Oakland; however, views of the Project site are blocked by I-880. As described in the 2002 EIR as Addended, public views of the Maritime sub-district include views from boaters in the Outer Harbor and motorists traveling on the Bay Bridge, I-880, and other public roadways. In addition, the Project site offers non-public views towards Bay and Bay Bridge, Treasure Island, and the San Francisco skyline.

Figure 3.3-1. Project Site Photos



Photograph of the Project site, currently used for AMS, from the western side of the site facing east. Typical mast security lights are shown.



~~This~~ Photograph of the United States Ship Cape Mohican and the existing cranes located north of the Project site at Berths 20 and 21; view from the northwestern corner facing east.

3.3.2 Summary of Prior Analysis

Impacts and mitigation measures in the 2002 EIR as Addended were reviewed for potential applicability to the Proposed Project. Impacts and the associated mitigation measures that may apply to the Proposed Project are summarized below.

The 2002 EIR as Addended concluded that potentially significant impacts related to light and glare from the OAB Area Redevelopment Plan would be reduced to less-than-significant levels:

- **Impact 4.11-3:** New security lighting and/or lighting for nighttime operations would alter current patterns of light or glare, and could alter nighttime views in the area.

For the potentially significant impact related to light and glare, the 2002 EIR as Addended identified the following mitigation measures and SCA to reduce impacts from the OAB Area Redevelopment Plan to a less-than-significant level:

- **Mitigation Measure 4.11-1:** New lighting shall be designed to minimize off-site light spillage; "stadium" style lighting shall be prohibited.

- **Mitigation Measure 4.11-2:** At or near the boundary of the proposed Gateway Park, new lighting shall be shielded to prevent light spillage into natural areas. (*Note: This mitigation measure is replaced with SCA- AES-1, which addresses light shielding; see below.*)

- **SCA AES-1: Lighting Plan:**

  Prior to the issuance of an electrical or building permit:

  The proposed lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties. Plans shall be submitted to the Planning and Zoning Division and the Electrical Services Division of the Public Works Agency for review and approval. All lighting shall be architecturally integrated into the site.

  (*Note: For projects at the Port, the Port's Lighting Policy applies and all lighting plans would be submitted to the Port as part of the Port Development Permit*).

The 2002 EIR as Addended concluded that the OAB Area Redevelopment Plan would have a less-than-significant impact on scenic vistas:

- **Impact 4.11-1:** Short-term mid-ground views of moderately sensitive viewers of the Bay may be blocked by redevelopment.

The Proposed Project differs from the OAB Area Redevelopment Plan by changing a portion of a terminal designated for container cargo to bulk construction aggregates. The different structures associated with the change in use would have the potential to change the visual character of the Project site and introduce new light and glare in the Project vicinity. Potential impacts associated with the Proposed Project area discussed in more detail below.

3.3.3 Impacts and Mitigation Measures

The Proposed Project was evaluated against applicable significance criteria from the 2002 EIR as Addended. The Proposed Project would have a significant impact on the environment if it would:

- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

IMPACTS

Impact AES-1: Would the Proposed Project substantially degrade the existing visual character or quality of the site and its surroundings?

The 2002 EIR as Addended concluded that short-term mid-ground views of moderately sensitive viewers of the Bay may be blocked by redevelopment (Impact 4.11-1). The Proposed Project involves the operation of a bulk construction aggregates terminal in a heavily industrialized area that supports ongoing maritime operations. Existing visible structures on-site include three 222-foot-tall cranes owned by the Port located at Berths 20 and 21 (See Figure 3.3-1). New structures associated with the bulk terminal that may be visible from the surrounding area include:

- a 36-foot-tall receiving hopper that would feed construction aggregates from the self- unloading OGVs onto the overhead conveyor system;
- a 20- to 40-foot-tall overhead conveyor system, which consists of a series of three elevated stationary feed conveyors approximately 20-30 feet tall and three 25- to 40-foot-tall radial stackers that would articulate along a concrete runway to create the horseshoe-shaped stockpiles;
- a reclaim conveyor system, located underneath the overhead conveyor system, that would convey construction aggregates from the stockpiles on a conveyor system to the barge loading hopper; and
- a two-story building that would serve as an office and scale house and provide support rooms for staff to run the terminal and monitor the inbound and outbound truck scale traffic.

Most of the other components of the Proposed Project, including truck scales, concrete runway and foundations, utility infrastructure, and site entrance improvements, would be at grade. During offloading of construction aggregates, OGVs would be at berth with the ship's boom extended toward the ship unloading hopper. Construction aggregates would be conveyed to up to three horseshoe-shaped stockpiles via the overhead conveyor system. The stockpiles would be located in the center of the site and would typically be between 20-25 feet in height but may reach up to 40 feet in height. During barge loading, barges would be at berth and construction aggregates would be loaded via the barge reclaim system, which consists of the reclaim hopper, reclaim conveyer system, and transfer tower. All components of the barge loading system would be lower in height than the components used during OGV offloading. Screened fencing, stacked freight containers, or a combination thereof would be installed around the north, south, and east perimeter of the Project site to provide a visual barrier to site operations. The visual barrier would vary between 8 feet and 45 feet in height. Thus, views of the

Project site by motorists along public roadways would primarily be blocked by this visual barrier. For boaters in the Outer Harbor, the new structures would be visible and consistent with the existing industrial and maritime uses of the Project site and the surrounding area and would not exceed the height of existing structures in the Redevelopment Area, such as cranes, stacked containers, warehouses, and two-story terminal administration buildings.

During construction, large cranes, pile drivers, and other construction equipment would be visible on the Project site. However, impacts associated with construction activities would be temporary due to the short-term nature of construction (approximately 9-12 months).

At the end of ERA's lease with the Port, all Project infrastructure would be removed and the Project site would be restored to pre-Project conditions (i.e., the site would be filled and restored to the pre-Project grade and repaved).

The Proposed Project would cause minimal impacts to the existing visual quality of the Project site and its surroundings. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No new or existing mitigation measures are required.

Impact AES-2: Would the Proposed Project create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?

The 2002 EIR as Addended concluded that new security lighting and/or lighting for nighttime operations would alter current patterns of light or glare and could alter nighttime views in the area (Impact 4.11-3). Security lighting and lighting for nighttime operations are currently present throughout the Maritime sub-district, consistent with the description in the 2002 EIR as Addended. Existing lighting on the Project site includes 80-foot-tall light masts located in rows throughout the Project site, including along the shoreline. Some light masts would be removed, and new lighting would be installed on the overhead conveyor system, radial stackers, barge reclaim system, and the scale house. Security lighting would be installed along the north perimeter of the site. All lighting would comply with Port lighting standards and would be aimed downward to reduce light and glare pollution. Lighting on-site would generally blend in with nighttime lighting generated by surrounding security lighting, industrial uses, and maritime operations. Additionally, no nighttime construction would be required. Thus, with the addition of new light sources, it is not anticipated that there would be a substantial amount of light or glare affecting daytime or nighttime views.

The Proposed Project would create a new source of nighttime light. However, Mitigation Measure 4.11-1 and SCA AES-1: Lighting Plan would be applied to the Project; any lighting installed on-site would be designed to minimize off-site light spillage and lighting fixtures would be fully equipped with shields and guards to prevent glare on associated properties. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended, which was **less than significant with mitigation**.

Table 3.3-1 summarizes the impacts from the 2002 EIR as Addended that apply to the Proposed Project; indicates SCA and/or mitigation measures that would apply to the Proposed Project; and indicates whether a new significant impact or a substantial increase in an identified impact would occur. No new significant impacts or substantial increase in the severity of an impact related to aesthetics not previously disclosed in the 2002 EIR as Addended would occur with implementation of the Proposed Project.

Table 3.3-1. Impacts Related to Aesthetic Resources

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact AES-1: Would the Proposed Project substantially degrade the existing visual character or quality of the site and its surroundings?	None	Proposed Project would be consistent with existing views	Less than significant	No
Impact AES-2: Would the Proposed Project create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	Mitigation Measure 4.11-1 and SCA AES-1	Proposed Project would create a new source of light and glare	Less than significant with mitigation	No

3.4 AIR QUALITY

This section identifies potential air quality impacts of the Proposed Project; evaluates whether the Proposed Project would result in new significant impacts related to air quality not identified in the 2002 EIR as Addended for the OAB Area Redevelopment; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to Project changes, changes in setting, or new information. Previously identified mitigation measures and SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

Detailed emissions calculations and methodology used for the analyses in this section are provided in the Air Quality and Greenhouse Gas Analysis document (NV5/Alta Environmental 2020a), included in this ~~Draft~~ Final SEIR as Appendix C and in the Health Risk Assessment (HRA) for the Draft SEIR (NV5/Alta Environmental 2020b), included in this ~~Draft~~ Final SEIR as Appendix D

3.4.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

Updates to regulations relevant to air quality that have occurred since the 2012 Addendum include the following.

FEDERAL

The United States Environmental Protection Agency (USEPA) is responsible for setting and enforcing National Ambient Air Quality Standards (NAAQS) for the following air pollutants, known as criteria pollutants: ozone, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), PM with aerodynamic diameter of 10 microns or less (PM10), PM with aerodynamic diameter of 2.5 microns or less (PM2.5), and lead. USEPA is also granted additional authority by the Clean Air Act (CAA) and Amendments of 1990 to require states to reduce emissions of criteria pollutants as well as ozone precursors (oxides of nitrogen [NOx] and volatile organic compounds [VOCs]) in areas that violate the NAAQS (known as non-attainment areas) and to limit emissions from new stationary sources in attainment areas. While California regulates on-road mobile sources (cars and trucks) and most off-road mobile sources (e.g., harbor craft, cargo handling equipment, construction equipment), USEPA has jurisdiction over aircraft, locomotives, and U.S. registered OGVs outside of state waters.

Changes to applicable federal regulations since 2012 include:

- In 2015, the USEPA lowered the primary and secondary ozone NAAQS from 0.075 ppm to 0.070 ppm. In 2012, the USEPA lowered the primary annual average PM2.5 NAAQS from 15 micrograms per cubic meter ($\mu g/m^3$) to 12 $\mu g/m^3$.

- In 2016, the USEPA and the National Highway Traffic Safety Administration (NHTSA) adopted Phase 2 fuel efficiency standards for medium- and heavy-duty trucks for model years 2018 and beyond (USEPA 2016). This phase was intended to include technology-advancing standards that substantially reduce GHG emissions and fuel consumption resulting in an ambitious, yet achievable, program that will allow manufacturers to meet the applicable standards over time, at reasonable cost, through a mix of different technologies. For semi-trucks, large pickup trucks,

vans, and other trucks, phase 2 standards will be phased in beginning with model year 2021 and culminating with model year 2027. While this regulation focuses on the reduction of GHG emissions, it is anticipated that this regulation would also help reduce criteria air pollutants.

STATE

CARB is responsible for implementation of the California Clean Air Act (CCAA) and Federal CAA within the State of California, for regulating mobile sources, and for preparing and submitting the State Implementation Plan (SIP), which details how the state plans to achieve attainment of the NAAQS and California Ambient Air Quality Standards (CAAQS). The attainment status for the San Francisco Bay Area Air Basin for the NAAQS and CAAQS is summarized in **Table 3.4-1** (BAAQMD 2020a).

Table 3.4-1. San Francisco Bay Area Air Basin Attainment Status – National and California Ambient Air Quality Standards (NAAQS and CAAQS)

Pollutant	Averaging Time	CAAQS Concentration	CAAQS Attainment Status	NAAQS Concentration	NAAQS Attainment Status
Ozone	8 Hour	0.070 ppm	N	0.070 ppm	N
Ozone	1 Hour	0.09 ppm	N	--	--
CO	8 Hour	9.0 ppm	A	9 ppm	A
CO	1 Hour	20 ppm	A	35 ppm	A
NO_2	1 Hour	0.18 ppm	A	0.100 ppm	--
NO_2	Annual Arithmetic Mean	0.030 ppm	--	0.053 ppm	A
SO_2	24 Hour	0.04 ppm	A	0.14 ppm	--
SO_2	1 Hour	0.25 ppm	A	0.075 ppm	--
SO_2	Annual Arithmetic Mean	--	--	0.030 ppm	--
PM10	Annual Arithmetic Mean	20 $\mu g/m^3$	N	--	--
PM10	24 Hour	50 $\mu g/m^3$	N	150 $\mu g/m^3$	U
PM2.5	Annual Arithmetic Mean	12 $\mu g/m^3$	N	12 $\mu g/m^3$	U/A
PM2.5	24 Hour	--	--	35 $\mu g/m^3$	N
Sulfates	24 Hour	25 $\mu g/m^3$	A	--	--
Lead	30 Day Average	1.5 $\mu g/m^3$	A	--	--
Lead	Calendar Quarter	--	--	1.5 $\mu g/m^3$	A
Lead	Rolling 3 Month Average	--	--	0.15 $\mu g/m^3$	--
Hydrogen Sulfide	1 Hour	0.03 ppm	U	--	--
Vinyl Chloride	24 Hour	0.010 ppm	No Info Available	--	--

Pollutant	Averaging Time	CAAQS Concentration	CAAQS Attainment Status	NAAQS Concentration	NAAQS Attainment Status
Visibility Reducing Particles	8 Hour	Extinction Coefficient of 0.23 kilometer with relative humidity less than 70%	U	--	--

A = Attainment, N = Non-attainment, U = Unclassified

$\mu g/m^3$ = micrograms per cubic meter, ppm = parts per million

Changes to applicable State regulations since the 2012 Addendum include:

- Under the OGV Clean Fuel Regulation, as of January 1, 2012, OGVs operating within 24 nautical miles of the California coast must use approved fuels with a sulfur content that does not exceed 0.1%. In addition, under the At-Berth Regulation, container, passenger, and refrigerated cargo ships that routinely visit a major California port (including the Port) must meet the auxiliary engine emission reduction requirements of the At-Berth Regulation, which in nearly all cases requires that these ships utilize shore power while at berth. Currently, the At-Berth Regulation does not apply to other OGV types including bulk cargo vessels. However, on August 27, 2020, CARB approved revisions to the At-Berth regulation which increase the stringency of requirements for vessels types currently subject to the rule and require tanker and ro-ro (roll-on/off or car carrier) vessels to meet similar requirements. Bulk and general cargo vessels are not subject to the revised rule but will be subject to an interim evaluation to consider potential future control requirements.

- Under the California's Commercial Harbor Craft Regulation, which first went into effect in 2007 and was amended in 2010, tug boats and other commercial harbor craft (CHC) have been required to re-power or retrofit existing vessels or purchase new vessels meeting increasingly stringent emission reduction requirements. Requirements under the existing rule will be fully phased in by 2022. CARB is currently developing proposals for additional amendments to the rule which would expand the rule to include additional types of CHC and further reduce emissions by requiring more advanced propulsion technologies, including zero emission (ZE) technologies.

- CARB implemented the Drayage Truck Rule in 2011; this rule is in effect through December 31, 2022, after which all trucks with Gross Vehicle Weight Rating (GVWR) over 14,000 pounds, including drayage trucks, will be subject to the Truck and Bus Regulation. As a result, emissions from trucks visiting the Port have been declining as trucks have complied with each new phase of the Drayage Truck Rule and the Truck and Bus Regulation. Between 2005 and 2017, diesel particulate matter (DPM) emissions from Port drayage trucks were reduced by 98 percent (Port of Oakland 2018). On June 25, 2020, CARB adopted the Advanced Clean Trucks Regulation, which will require truck manufacturers to transition from diesel trucks and vans to electric ZE trucks beginning in 2024. Under the new rule, every new truck sold in California will be ZE by 2045.

LOCAL

BAAQMD has primary responsibility for air quality planning and regulation in the San Francisco Bay Area Air Basin, which includes Alameda County. BAAQMD has responsibility for regulating and permitting stationary sources and assuring that State and Federal controls on mobile sources are effectively implemented via administration of grant funding for mobile sources, among other duties. To provide more complete context for BAAQMD regulations, the information provided below includes both updates since the 2012 Addendum and regulations that were in effect prior to the 2012 Addendum.

- BAAQMD continuously updates its air quality plans and existing regulations and promulgates new regulations. Specific stationary source regulations applicable to the Proposed Project include the following under Regulation 2 for new sources:
  - Regulation 2 – New Source Review
- Rule 2-2-202 Best Available Control Technology (BACT)
- Rule 2-2-212: Cumulative Increase
- Rule 2-2-221: Offsets
  - Regulation 6 – Particulate Matter
- Rule 6-1-301: Ringlemann No. 1 Limitation
- Rule 6-1-310: Total Suspended Particulate Concentration Limits
- Rule 6-1-311: Total Suspended Particulate Weight Limits
- Rule 6-6-301: Prohibition of Trackout onto Paved Roadways

  Stationary sources of emissions that are not exempt as identified in Regulation 2, Rule 1 are required to obtain an authorization to begin construction and a permit to operate before initiating construction and operations. BAAQMD is responsible for implementing the Prevention of Significant Deterioration (PSD) stationary source permitting program as outlined in the Federal CAA. Stationary sources belonging to any of the industrial source categories listed in 40 Code of Federal Regulations (CFR) 52.21 (b)(1)(i) with annual emissions of any PSD pollutant (SO_2, NOx, PM10 or CO) greater than 100 tons/year are subject to the PSD regulations. The PSD applicability threshold for other sources, which would include the Proposed Project, is 250 tons/year.

  For sources with emissions less than 250 tons/year but greater than 10 tons/year (NOx or precursor organic compounds [POC]) or 100 tons/year (PM2.5, PM10, SO_2), including emissions from cargo carriers other than motor vehicles associated with the source (Regulation 2-2-610), Rules 2-2-302 and 2-2-303 require that emission offsets be purchased for the un-offset cumulative emissions increase as defined in Rule 2-2-608.

- The BAAQMD's 2017 CAP presents an updated roadmap by which the Bay Area will continue to make progress toward attaining all federal and state air quality standards and eliminating inter-community health risk disparities from air pollutant exposures. The CAP includes emission

reduction measures focused on ozone, PM, and TACs. As discussed further in Section 3.6, "Greenhouse Gas Emissions," the CAP also includes a regional climate protection strategy focused on achieving California's 2030 and 2050 GHG reduction targets with measures to reduce emissions of methane and other high impact, short-term climate forcers ("Super GHGs") and to reduce fossil fuel combustion.

- Released in June 2019, the Port's Seaport Air Quality 2020 and Beyond Plan (2020 and Beyond Plan [Port of Oakland 2019]) is the Port's master plan for achieving its vision of a ZE Seaport. It builds on the Port's Maritime Air Quality Improvement Plan (MAQIP), approved in 2009. The MAQIP established a vision, goals, strategies, and targets to reduce emissions from Seaport-related equipment sources. The MAQIP set a 12-year time frame—from 2009 to 2020—for implementation. As a result of actions under the MAQIP, DPM emissions at the Port have decreased 80 percent since 2005, according to the Port's 2017 Seaport Emissions Inventory; Port truck diesel emissions have been reduced by 98 percent since 2005 (Port of Oakland 2018).

- In response to the requirements of Assembly Bill (AB) 617, CARB established the Community Air Protection Program (CAPP), which is designed to reduce exposures in communities most impacted by air pollution. BAAQMD, working in conjunction with local community groups, identified several communities, including the West Oakland community, for participation in the CAPP. This community-lead process resulted in the development of the West Oakland Community Action Plan (WOCAP [BAAQMD 2019]), which focusses on reducing exposures in West Oakland to fine PM (PM2.5), DPM, and TACs and sets emission reduction targets. The overarching goal of the WOCAP is "[t]o protect and improve community health by eliminating disparities in exposure to local air pollution." The WOCAP includes 84 strategies designed to achieve its goals, including land use, mobile source, stationary source, and health programs strategies. Eleven of the 84 strategies are Port-related and the Port has included many of them into the 2020 and Beyond Plan. Table 3.4-13 in the impact analysis section outlines these 11 strategies.

UPDATED ENVIRONMENTAL SETTING

The physical environmental setting at the Project site and immediate vicinity as described in the 2002 EIR as Addended remains accurate. The Port and the City have continued to develop the surrounding area in a manner consistent with the 2002 EIR as Addended.

The Proposed Project is located within the San Francisco Bay Area Air Basin, which is currently in nonattainment of the ambient standards (NAAQS and CAAQS) for ozone and PM2.5 and in nonattainment of the ambient standard (CAAQS) for PM10. Local meteorological conditions, types of sources of air pollution within the vicinity of the Project, and health effects of specific regulated air pollutants were described in the 2002 EIR as Addended and have not substantially changed. Updated data on emissions and local ambient pollutant concentrations is presented below, together with a summary of results from recent air quality modeling of the area.

Recent trends in emissions within the San Francisco Bay Area air basin from anthropogenic (human) sources, i.e. excluding natural sources such as ROG from vegetation, are shown in **Figure 3.4-1**. ROG and NOx emissions have been reduced since 2012 along with mobile source PM2.5 emissions. Note that DPM represents just a portion of the PM2.5 emissions shown; DPM emissions are not tabulated

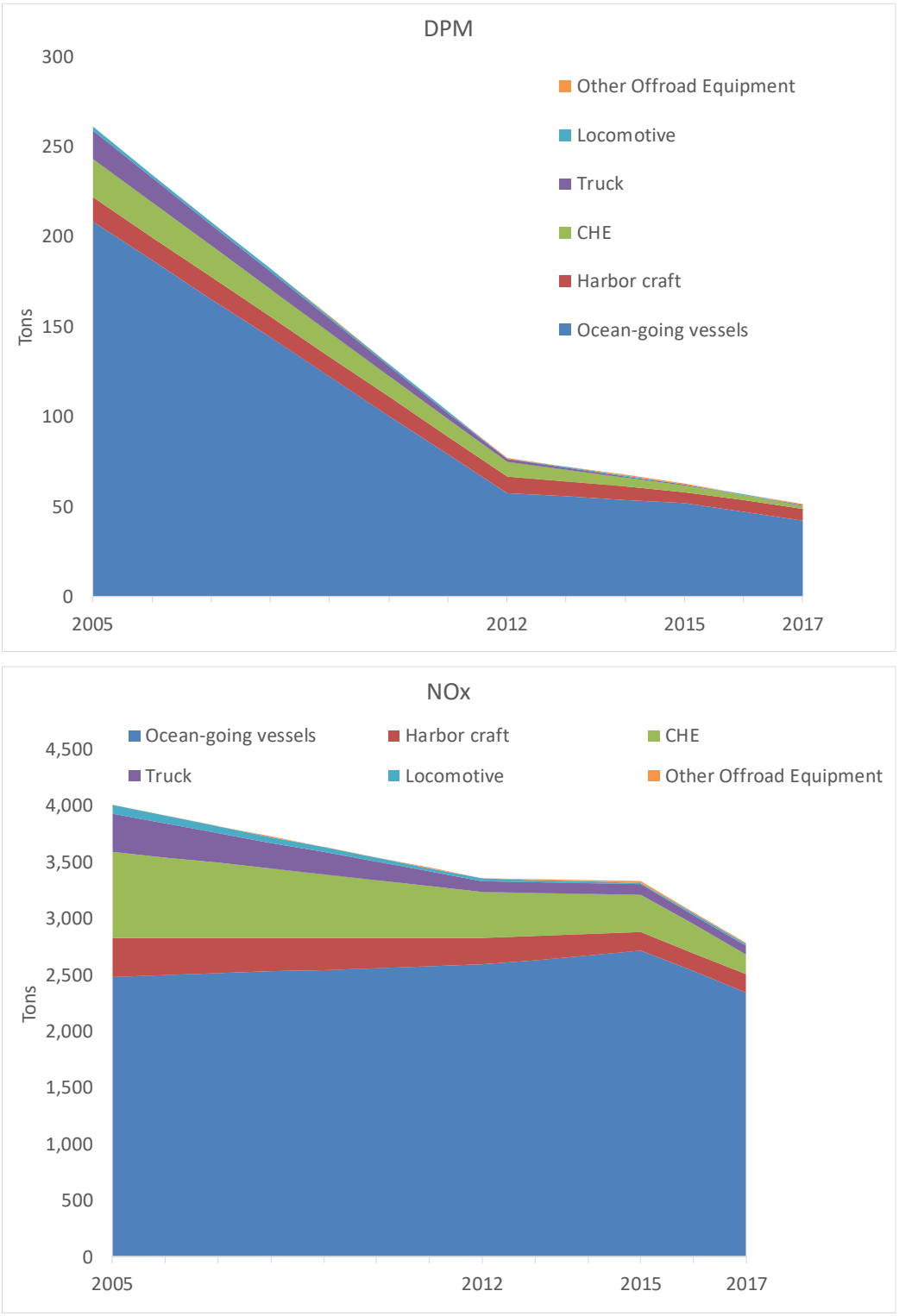
separately in the CARB summary data used to generate this figure. DPM and NOx emissions from Port maritime operations have also declined since 2005 as shown in **Figure 3.4-2**.

Figure 3.4-1. Annual Anthropogenic Emissions in the San Francisco Bay Area Air Basin, 2012 – 2019

Note: Measurements are in average tons per day; "area sources" include non-mobile sources such as residential hot water boilers that are too small or numerous to identify with any individual point location.

Source: CARB 2016

Figure 3.4-2. Trends in Port of Oakland Annual DPM and NOx Emissions for 2005–2017



Note: Measurements are in tpy.

Source: Port of Oakland 2018

Ambient air quality monitoring stations within the vicinity of the Proposed Project include BAAQMD's West Oakland monitor and a temporary network of three monitoring sites operated by Northgate Environmental on behalf of the City to monitor conditions during construction of the Prologis logistics facility development in the northeast portion of the OAB redevelopment area. Site locations are shown in **Figure 3.4-3**.

Figure 3.4-3. Locations of Local Air Quality Monitoring Sites

Source: Northgate 2018

Data from the Northgate monitoring network for 2015 – 2017 (the most recent three-year period for which summary data have been published) show that the 3-year averages of the annual average PM2.5 concentrations were 7.44 µg/m³, 8.40 µg/m³, and 12.84 µg/m³ at the AQM-1, AQM-2, and AQM-3 monitoring sites, respectively (Northgate 2018). These averages are based on all valid observations; any data which may have been influenced by an exceptional event as defined by USEPA (e.g., smoke from a wildfire) were not excluded. A summary of 24-hour exceedance events is provided in **Table 3.4-2**.

Table 3.4-2. 24-hour Exceedances of the PM2.5 Standard (12 µg/m^3) at Local Monitoring Sites

Year	Quarter	AQM-1	AQM-2	AQM-3	W. Oakland
2015	Q1	1	5	7	3
2015	Q2	0	0	0	0
2015	Q3	0	0	0	0
2015	Q4	0	0	0	0
2015	Total	1	5	7	3
2016	Q1	0	0	0	0
2016	Q2	0	0	0	0
2016	Q3	0	0	0	0
2016	Q4	3	0	0	0
2016	Total	3	0	0	0
2017	Q1	3	0	0	0
2017	Q2	2	0	0	0
2017	Q3	3	3	4	3
2017	Q4	4	2	6	3
2017	Total	12	5	10	6

A summary of recent data from monitoring sites in the general vicinity of the Port operated by BAAQMD including the West Oakland monitoring site is presented in **Table 3.4-3**.

Table 3.4-3. Air Quality Monitoring Data Summary for BAAQMD Sites in the Coast and Central Bay Region –2018

Pollutant/Statistic	Berkeley Aquatic Park*	Laney College Freeway	Oakland	Oakland-West	Richmond	San Francisco	San Pablo
Ozone							
Max 1-hr (ppb)	59	-	61	63	-	65	61
State 1-hr Days Exc.	0	-	0	0	-	0	0
Max 8-hr (ppb)	49	-	52	50	-	49	52
NAAQS Exc. Days	0	-	0	0	-	0	0
CAAQS Exc. Days	0	-	0	0	-	0	0
3-Yr Avg (ppb)	*	-	51	46	-	47	49
Carbon Monoxide							
Max 1-hr (ppm)	2.6	2.1	3.3	3.6	-	1.9	1.9
Max 8-hr (ppm)	2.2	1.6	2.4	3.1	-	1.6	1.7
Exc. Days	0	0	0	0	-	0	0

Pollutant/Statistic	Berkeley Aquatic Park*	Laney College Freeway	Oakland	Oakland-West	Richmond	San Francisco	San Pablo
Nitrogen Dioxide							
Max 1-hr (ppb)	73	73	73	76	-	69	60
Annual Avg	15	17	10	12	-	11	8
NAAQS 1-hr Exc. Days	0	0	0	0	-	0	0
CAAQS 1-hr Exc. Days	0	0	0	0	-	0	0
Sulfur Dioxide							
Max 1-hr	-	-	-	11.9	24.3	-	10.2
Max 24-hr	-	-	-	2.5	6.3	-	2.1
NAAQS Exc. Days	-	-	-	0	0	-	0
CAAQS Exc. Days	-	-	-	0	0	-	0
PM10							
Annual Avg.	-	-	-	-	-	20.1	21.4
Max 24-hr Avg.	-	-	-	-	-	43	200
NAAQS 24-hr Exc. Days	-	-	-	-	-	0	1
CAAQS 24-hr Exc. Days	-	-	-	-	-	0	2
PM2.5							
Max. 24-hr ($\mu g/m^3$)	165.5	168.2	172.1	169.2	-	177.4	195.4
NAAQS 24-hr Exc. Days	13	14	13	14	-	14	14
3-Yr Avg of Annual 98th Percentile 24-hr Avg ($\mu g/m^3$)	*	45	43	45	-	44	44
Annual Avg ($\mu g/m^3$)	11.9	14.4	11.8	14.4	-	11.7	12.7
3-Yr Avg of Annual Avg ($\mu g/m^3$)	*	11.6	9.1	12	-	9.6	10.5

*Near-road monitoring at Berkeley Aquatic Park began on July 1, 2016; therefore 3-year averages for ozone and PM2.5 are not available.

- Indicates air pollutant is not monitored for this site.

Max 1-hr/Max 8-hr/Max 24-hr= The highest average pollutant concentration over a one-hour period, an eight-hour period (on any given day), or a 24-hour period (from midnight to midnight).

State 1-hr Days Exc.= The number of days during the year for which the station recorded pollutant concentrations exceeding the California standard.

Exc.=Exceedance

Source: BAAQMD 2018

3.4.2 Summary of Prior Analysis

Impacts and mitigation measures in the 2002 EIR as Addended were reviewed for potential applicability to the Proposed Project. Impacts and the associated mitigation measures that may apply to the Proposed Project are summarized below.

The 2002 EIR as Addended concluded that the OAB Area Redevelopment Plan would have potentially significant impacts on air quality related to diesel emissions from construction equipment exhaust, diesel emissions from increased port and maritime operations and trucking activities, and vehicle emissions from passenger vehicles and delivery trucks:

- **Impact 4.4-2:** Construction Equipment and Diesel Emissions. The 2002 EIR as Addended concluded that construction equipment exhaust could increase levels of NOx, ROG, CO, and PM10 that could exceed 15 tpy, or result in a substantial increase in diesel emissions.

- **Impact 4.4-3:** Maritime and Rail Operations. The 2002 EIR as Addended concluded that increased Port maritime and rail operations, as well as trucking activities associated with redevelopment operations, would emit NOx in excess of 15 tpy, substantially increase diesel emissions, and potentially expose pollution-sensitive receptors to substantial pollutant concentrations.

For the potentially significant impact related to construction equipment and diesel emissions, the 2002 EIR as Addended identified the following SCA, which would reduce construction equipment emissions such that they would meet thresholds under the 1999 BAAQMD Guidelines; however, the residual impact with respect to a "substantial increase in diesel emissions" from the OAB Area Redevelopment Plan remained significant and unavoidable:

- **SCA AIR-1: Construction Management Plan:** The project applicant shall submit to the Port for review and approval a construction management plan that identifies the conditions of approval and mitigation measures to construction impacts of the project and explains how the project applicant will comply with these construction-related conditions of approval and mitigation measures.

- **SCA AIR-2: Construction-Related Air Pollution Controls (Dust and Equipment Emissions):** During construction, the project applicant shall require the construction contractor to implement all of the applicable measures recommended by BAAQMD.

The 2002 EIR as Addended identified the following mitigation measures to reduce significant impacts related to maritime and rail operations and vehicle emissions for the entire OAB Area Redevelopment Plan; however, the residual impact remained significant and unavoidable:

- **Mitigation Measure 4.4-3:** The Port shall develop and implement a criteria pollutant reduction program aimed at reducing or off-setting Port-related emissions in West Oakland from its maritime and rail operations to less-than-significant levels, consistent with applicable federal, state, and local air quality standards. The program shall be sufficiently funded to strive to reduce emissions from redevelopment related contributors to local West Oakland air quality and shall continually reexamine potential reduction toward achieving less than significant impacts as new

technologies emerge. The adopted program shall define measurable reductions within specific time periods.

- **Mitigation Measure 4.4-5:** Major developers shall fund on a fair share basis BAAQMD recommended feasible Transportation Control Measures (TCMs) for reducing vehicle emissions from commercial, institutional, and industrial operations, as well as all CAP TCMs BAAQMD has identified as appropriate for local implementation.

The 2002 EIR as Addended concluded that the OAB Area Redevelopment Plan would have potentially significant impacts related to fugitive dust, which would be reduced to less-than significant levels:

- **Impact 4.4-1:** Particulate Matter (PM) as Fugitive Dust. The 2002 EIR as Addended concluded that construction/remediation activities on the project site would have a potentially significant impact on the emission of PM as fugitive dust.

For the potentially significant impact related to emission of PM as fugitive dust, the 2002 EIR as Addended identified the following SCA to reduce the impact to a less-than-significant level:

- **SCA AIR-2: Construction-Related Air Pollution Controls (Dust and Equipment Emissions):** Refer to text above.

- **SCA AIR-1: Construction Management Plan:** Refer to text above.

3.4.3 Supplemental Analyses Related to the Proposed Project

The Proposed Project modifies the OAB Area Redevelopment Plan by changing a portion of a terminal designated for container cargo to bulk construction aggregates. This has the potential to alter previously disclosed air quality impacts. The potential changes in impacts are evaluated here first by examining impacts from the Proposed Project on its own and second by examining how the previously identified impacts of the OAB Redevelopment Plan listed in Section 3.4.2 would be altered as a result of the change in cargo type that would occur under the Proposed Project. The latter portion of the analysis is based on a comparison of air pollutant emissions from the Proposed Project to emissions which would occur if the Proposed Project site were to be used as part of a container terminal as was assumed in the 2002 EIR as Addended. These analyses are discussed below.

3.4.4 Impacts and Mitigation Measures

APPROACH TO ANALYSIS

The Proposed Project was evaluated against applicable significance criteria consistent with criteria used in the 2002 EIR as Addended. The criteria have changed over time as follows:

- At the time the 2002 EIR was prepared, the applicable thresholds of significance guidance were based on the 1999 *BAAQMD CEQA Guidelines* (BAAQMD 1999).

- In May of 2011, BAAQMD adopted revised Thresholds of Significance for use in determining the significance of projects' environmental effects under CEQA (2011 Thresholds) and published a revised version of the OAB area redevelopment district's (District's) CEQA Guidelines for

consideration by lead agencies (BAAQMD 2012). The 2011 Thresholds lowered the previous (1999) thresholds of significance for annual emissions of ROG, NOx, and PM10, and set a standard for PM2.5 and fugitive dust. The 2011 CEQA Guidelines also included methodologies for evaluating risks and hazards for the siting of stationary sources and of sensitive receptors.

- In May 2012, BAAQMD CEQA Guidelines were updated as advisory guidelines to be followed by local agencies at their own discretion.

- In May 2017, BAAQMD published a new version of the Guidelines (BAAQMD 2017a) to address certain issues decided in the December 17, 2015 California Supreme Court opinion in the matter of *Cal. Bldg. Indus. Ass'n vs. Bay Area Air Quality Management Dist. (62 Cal. 4th 369)* including among others, the court's finding that CEQA does not generally require an analysis of the impacts of locating development in areas subject to environmental hazards unless the project would exacerbate existing environmental hazards, but that public agencies remain free to conduct this analysis regardless of whether it is required by CEQA. Although BAAQMD is working on an update to the May 2017 CEQA guidelines, the current May 2017 construction and operational thresholds of significance remain unchanged from the 2011 CEQA guidelines.

A summary of the 1999 and 2011/2017 thresholds of significance is presented in **Table 3.4-4**. Although significance determinations are based on the thresholds from the 2002 EIR per CEQA requirements for a Supplemental EIR, the analysis in this ~~Draft~~ Final SEIR evaluates air quality using both the 2002 EIR thresholds (based upon BAAQMD 1999 CEQA Thresholds) and the 2011/2017 thresholds. This has been done to provide more information to the public and decision makers.

Table 3.4-4. Summary of BAAQMD CEQA Significance Thresholds Applied in This Analysis[1]

	Construction-Related Thresholds 1999 Guidance[2]	Construction-Related Thresholds 2011/2017 Guidance Max Daily Emissions (lb/day)	Operational Thresholds 1999 Guidance Daily Emissions (lb/day)	Operational Thresholds 1999 Guidance Annual Emissions (tons/year)	Operational Thresholds 2011/2017 Guidance Avg Daily Emissions (lb/day)	Operational Thresholds 2011/2017 Guidance Max Annual Emissions (tons/year)
Criteria Pollutants and Precursors (Regional)						
ROG	None	54	80	15	54	10
NO_x	None	54	80	15	54	10
PM10 (Particulate Matter~~-Exhaust~~)	None	82	80~~/75~~	15	82	15
PM2.5 (Particulate Matter~~-Exhaust~~)	None	54	None	None	54	10
PM10/PM2.5 (Fugitive Dust)	Feasible Control Measures~~/64~~	Best Management Practices	None	None	None	None
Criteria Air Pollutants and Precursors (Local)						
CO	None	None	9.0 ppm (8-hour average) 20.0 ppm (1-hour average)		9.0 ppm (8-hour average) 20.0 ppm (1-hour average)	
Risks and Hazards						
Siting a New Source or Receptor (Individual Project)	None	Cancer Risk: >10 in a million Hazard Index: >1.0 PM2.5 Level: >0.3 $\mu g/m^3$ annual average	Cancer Risk: >10 in a million Non-Cancer Hazard Index: >1.0		Cancer Risk: >10 in a million Hazard Index: >1.0	PM2.5 Level: >0.3 $\mu g/m^3$ annual average~~3~~

	Construction-Related Thresholds 1999 Guidance[2]	Construction-Related Thresholds 2011/2017 Guidance Max Daily Emissions (lb/day)	Operational Thresholds 1999 Guidance Daily Emissions (lb/day)	Operational Thresholds 1999 Guidance Annual Emissions (tons/year)	Operational Thresholds 2011/2017 Guidance Avg Daily Emissions (lb/day)	Operational Thresholds 2011/2017 Guidance Max Annual Emissions (tons/year)
Siting a New Source or Receptor (Cumulative Threshold)	N/A	Cancer Risk: >100 in a million Hazard Index: >10 PM2.5 Level: >0.8 µg/m^3 annual average	N/A	N/A	Cancer Risk: >100 in a million Hazard Index: >10	PM2.5 Level: >0.8 µg/m^3 annual ~~average~~[5] average[3]

1. While this Addendum compares the Project's ~~project's~~ impact to both the 1999 and 2011/2017 BAAQMD CEQA significance thresholds, the 1999 thresholds were applied in this analysis to determine impact significance.

2. The 1999 BAAQMD CEQA thresholds do not specify quantitative significance thresholds for construction-related emissions but considers construction-related emissions to be a significant impact unless BAAQMD-recommended dust control measures are implemented during construction. While the impact analysis compares project impacts to both the 1999 non-quantitative threshold and 2011 threshold, the significance of project-related construction emissions is determined using the 1999 non-quantitative threshold.

~~Alternatively, the GHG impact is less than significant if the project complies with a Qualified Community Risk Reduction Plan. In addition, the draft 2017 Guideline includes a Tiered Thresholds Option under which the threshold for the increase in PM2.5 annual average concentrations in Impacted Communities as defined through the District's Community Air Risk Evaluation (CARE) program is 0.2 µg/m³.~~

~~SP = service population (the total number of employees and residents).~~

3. Considering all sources within 1,000-foot radius from fence line of source.

4. Impacts are significant unless the appropriate Feasible Control Measures are implemented (see December 1999 BAAQMD CEQA Guidelines, Table 2).

5. The PM10 threshold specified in the BAAQMD 1999 Guidelines does not explicitly reference only exhaust emissions and the on-road mobile source emission calculation procedures described in the Guideline specify PM10 emission factors that include exhaust, tire wear, and entrained road dust emissions.

Sources: BAAQMD 1999, 2012, 2017a.

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

- Result in construction emissions exceeding BAAQMD recommended thresholds, or result in total operational emissions of ROG, NOx, or PM10 of 15 tpy or greater or 80 pounds per day or greater.
- Expose sensitive receptors to substantial pollutant concentrations:
    i. Result in potential to expose persons to substantial levels of TACs, such that the probability of contracting cancer for the MEI exceeds 10 in one million.
    ii. Result in ground level concentrations of non-carcinogenic TACs such that the HI would be greater than 1 for the MEI.
- 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.
- Contribute to carbon monoxide concentrations exceeding the State ambient air quality standards of 9 ppm averaged over 8 hours and 20 ppm for 1 hour.
- Result in a substantial increase in diesel emissions.

IMPACTS

Impact AIR-1: Would the Project result in construction emissions or total operational emissions exceeding BAAQMD recommended thresholds of ROG, NOx, or PM10 of 15 tpy or greater or 80 pounds per day or greater?

PROJECT CONSTRUCTION

The 2002 EIR as Addended concluded that construction equipment exhaust could significantly increase levels of ROG, NO_x, and PM10 above 15 tpy (Impact 4.4-2). Construction of the Proposed Project would result in emissions of fugitive dust from grading, surface preparation, and other construction activities, along with construction equipment exhaust emissions of criteria pollutants and TACs. Construction would last 9-12 months and emissions would vary day-to-day depending on which construction activities are being performed.

Average daily emissions of air pollutants that would be expected from Project construction are shown in **Table 3.4-5a** (unmitigated emissions). Emissions generated from on-road vehicles and off-road equipment used for construction of the Proposed Project were estimated using the California Air Pollution Control Officers Association (CAPCOA) California Emissions Estimator Model (CalEEMod). Project specifics, such as schedule, construction equipment, and material hauling trips, were utilized as CalEEMod inputs where available. Default inputs were utilized where site-specific information was not available. Unmitigated construction emissions were calculated using default equipment tier levels for the construction period (June 2021-May 2022) as described in Appendix C. Emissions from barge trips, which may be utilized for transport during construction, were added to the CalEEMod emissions estimates. Details of the emissions calculations, including the CalEEMod report file with model inputs, are provided in Appendix C.

CalEEMod generates emission estimates in terms of tpy for each phase of construction. Construction is assumed to occur from June 2021 until May 2022. Emissions occurring in 2021 were summed with emissions occurring in 2022 to represent emissions over the full 12-month construction period and then divided by 313 working days (based on a 6-day work week excluding holidays) to obtain the average daily emissions in pounds per day shown in Table 3.4-5a.

Table 3.4-5a. Average Daily Construction Emissions: Unmitigated – Pounds per Day

	ROG	NOx	Exhaust PM10	Fugitive Dust PM10	Total PM10	Exhaust PM2.5	Fugitive Dust PM2.5	Total PM2.5
Proposed Project[1]	4.11	39.19	1.68	0.62	2.30	1.58	0.24	1.82
BAAQMD 1999 Significance Threshold[2]	None	None	None	Feasible Control Measures	None	None	Feasible Control Measures	None
Does Proposed Project exceed BAAQMD 1999 Thresholds?[2]	N/A	N/A	N/A	No	N/A	N/A	No	N/A
BAAQMD 2011/2017 Significance Threshold[2]	54	54	82	BMPs	None	54	BMPs	None
Does Proposed Project exceed BAAQMD 2011/2017 Thresholds?[2,3]	No	No	No	No	N/A	No	No	N/A

BMPs = best management practices.

Lbs=pounds

1. Emissions shown include 70% fugitive dust control from watering.

2. BAAQMD Significance thresholds are detailed in Table 3.4-4.

3. The comparisons to BAAQMD 2011/2017 thresholds are provided for informational purposes only. They are not used for determining significance.

Source: Appendix C

As shown in Table 3.4-5a, the 1999 BAAQMD CEQA Guidelines did not include quantitative thresholds for ROG, NOx, PM10, or PM2.5. In accordance with the Port-adopted 2012 SCA/MMRP, the Proposed Project would be required to implement SCA AIR-1: Construction Management Plan and SCA AIR-2: Construction-Related Air Pollution Controls (Dust and Equipment Emissions) and these SCAs constitute "Feasible Control Measures" and "Best Management Practices (BMPs)" and would satisfy the 1999 BAAQMD significance thresholds for construction fugitive dust PM10 and PM2.5. Furthermore, construction emissions would be less than the 2011/2017 BAAQMD construction quantitative thresholds.

Although construction emission significance thresholds would not be exceeded by the Proposed Project for Impact AIR-1, construction emissions would be further reduced by implementation of Mitigation Measure ERA AQ-2, a new mitigation measure required under Impact AIR-2 as described below. Mitigation Measure ERA AQ-2 requires that all construction equipment meet Tier 4 emission standards. **Table 3.4-5b** below illustrates the emission reduction benefit that would result from implementation of Mitigation Measure ERA-AQ-2.

In conclusion, emissions from construction of the Proposed Project would not exceed BAAQMD significance thresholds and therefore, construction of the Proposed Project would not substantially increase the severity of the previously identified **significant and unavoidable** impact of the OAB Area Redevelopment Plan construction activities disclosed in the 2002 EIR as Addended.

Table 3.4-5b. Average Daily Construction Emissions: Mitigated – Pounds per Day

	ROG	NOx	Exhaust PM10	Fugitive Dust PM10	Total PM10	Exhaust PM2.5	Fugitive Dust PM2.5	Total PM2.5
Proposed Project[1]	2.18	19.33	0.64	0.62	1.26	0.60	0.24	0.84
Comparison to Thresholds								
BAAQMD 1999 Significance Threshold[2]	None	None	None	Feasible Control Measures	None	None	Feasible Control Measures	None
Does Proposed Project exceed BAAQMD 1999 Thresholds?	N/A	N/A	N/A	No	N/A	N/A	No	N/A
BAAQMD 2011/2017 Significance Threshold[2]	54	54	82	BMPs	None	54	BMPs	None
Does Proposed Project exceed BAAQMD 2011/2017 Thresholds? [2,3]	No	No	No	No	N/A	No	No	N/A

BMPs = best management practices.

1. Emissions shown include 70% fugitive dust control from watering.
2. BAAQMD Significance thresholds are detailed in Table 3.4-4.
3. The comparisons to BAAQMD 2011/2017 thresholds are provided for informational purposes only. They are not used for determining significance.

Source: Appendix C

PROJECT OPERATIONS

Operation of the Proposed Project would result in emissions of fugitive dust from construction aggregate handling and stockpiling and resuspension (re-entrainment) of road dust from vehicle traffic. Operational emissions of criteria air pollutants and TAC emissions would occur from on-road vehicle and off-road equipment engine exhaust and exhaust from OGVs and harbor craft (tugboats). While OGV arrivals and offloading may occur at any time of the day or week, truck loading would only occur during

terminal working hours (16 hours per day, six days per week). Operation emissions were calculated using generally accepted emission factors, methods, and assumptions published by CARB, CAPCOA, and USEPA. A detailed description of the data, assumptions, and methods used, and more detail on results, are provided in Appendix C.

Maximum annual emissions of air pollutants from Project operation are shown in **Table 3.4-6a** (Proposed Project without mitigation) and **Table 3.4-6b** (Proposed Project with mitigation); average daily emissions are shown in **Table 3.4-7a** (Proposed Project without mitigation) and **Table 3.4-7b** (Proposed Project with mitigation). Proposed mitigation measures are discussed below.

As described in Chapter 2, *Project Description*, OGVs delivering bulk construction aggregate to the Proposed Project are projected to be of various ages and thus have a range of main (propulsion) engines corresponding to emission certification requirements ranging from Tier 0 to Tier 1 to Tier 2, with Tier 2 engines having the lowest NOx emissions of the three (all else being equal).[15] The number of vessels with each Tier level engines likely to call at the Proposed Project terminal in any given year is unknown. The vessel carrier currently serving the Applicant's Bay Area operations does not guarantee which vessels under its control may be used for any given delivery. The most conservative assumption (i.e., the assumption resulting in the highest estimated emissions) would be that all vessels arriving in a single 12-month period would be older vessels with Tier 0 engines. However, the Proposed Project includes a lease requirement that 25 percent of vessel calls meet Tier 2 or better emission standards in lease years 1 and 2. The lease requirement in years 3 through 12 would be 30% Tier 2 or better, and the requirement under any lease extended terms would be 40% Tier 2 or better. Taking the initial ~~this~~ lease requirement into account, the most conservative assumption is that 75 percent of calls are by Tier 0 vessels and 25 percent by Tier 2 vessels. Under this scenario, main engine NOx emission factors are reduced by 15% and total OGV NOx emissions including emissions from main and auxiliary engines are reduced by 6% compared to what they would be if all calls were made by the older Tier 0 vessels. OGV emissions shown in Tables 3.4-6a through 3.4-7b are based on compliance with the lease requirement that a minimum of 25 percent of vessel calls meet Tier 2 standards and the assumption that all other vessels would be Tier 0.

[15] Although vessels constructed starting 1 January 2016 must meet more stringent (Tier 3) emission performance standards, there are currently no Tier 3 vessels in the fleet serving Eagle Rock Aggregates.

Table 3.4-6a. Maximum Annual Operational Emissions: Unmitigated – Tons per Year

	ROG	NOx	Exhaust PM10	Fugitive Dust PM10	Total PM10	Exhaust PM2.5	Fugitive Dust PM2.5	Total PM2.5
OGV Transit and Maneuvering	1.17	25.19	0.28	N/A	0.28	0.26	N/A	0.26
OGV Hoteling	1.05	27.7	0.39	N/A	0.39	0.36	N/A	0.36
Tug (Assist + Barge)	0.97	6.99	0.24	N/A	0.24	0.24	N/A	0.24
Trucks – on-site	0.40	5.06	<0.01	2.37	2.37	<0.01	0.36	0.36
Trucks – off-site	0.08	5.61	0.06	0.49	0.55	0.05	0.12	0.17
Off-Road Equipment	1.52	1.82	0.11	1.41	1.52	0.10	0.21	0.31
Agg. Transfer	N/A	N/A	N/A	0.61	0.61	N/A	0.09	0.09
Agg. Stockpiles	N/A	N/A	N/A	2.97	2.97	N/A	0.45	0.45
Employee Commute	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01
Total:	5.18	**72.37**	1.08	7.85	8.93	1.02	1.23	2.24
Comparison to Thresholds								
BAAQMD 1999 Significance Thresholds[1]	15	15	15	N/A	N/A	N/A	N/A	N/A
Does Proposed Project exceed BAAQMD 1999 Thresholds?	No	**Yes**	No	N/A	N/A	N/A	N/A	N/A
BAAQMD 2011/2017 Significance Thresholds[1]	10.0	10.0	15.0	15.0	15.0	10.0	10.0	10.0
Does Proposed Project exceed BAAQMD 2011/ 2017 Thresholds?[1,2]	No	**Yes**	No	N/A	N/A	No	N/A	N/A

Note: **Bold** text indicates an exceedance of thresholds.

1. BAAQMD Significance thresholds are detailed in Table 3.4-4.

2. The comparisons to BAAQMD 2011/2017 thresholds are provided for informational purposes only. They are not used for determining significance.

Source: Appendix C

Table 3.4-6b. Maximum Annual Operational Emissions: Mitigated–Tons per Year

	ROG	NOx	Exhaust PM10	Fugitive Dust PM10	Total PM10	Exhaust PM2.5	Fugitive Dust PM2.5	Total PM2.5
OGV Transit and Maneuvering	1.17	25.19	0.28	N/A	0.28	0.26	N/A	0.26
OGV Hoteling	1.05	27.7	0.39	N/A	0.39	0.36	N/A	0.36
Tug (Assist + Barge)	0.97	6.99	0.24	N/A	0.24	0.24	N/A	0.24
Trucks – on-site	0.40	5.06	<0.01	2.37	2.37	<0.01	0.36	0.36
Trucks – off-site	0.08	5.61	0.06	0.49	0.55	0.05	0.12	0.17
Off-Road Equipment	0.86	0.68	0.04	1.41	1.45	0.04	0.21	0.25
Agg. Transfer	N/A	N/A	N/A	0.61	0.61	N/A	0.09	0.09
Agg. Stockpiles	N/A	N/A	N/A	2.97	2.97	N/A	0.45	0.45
Employee Commute	<0.01	0.06	<0.01	0.01	0.01	<0.01	<0.01	<0.01
Total:	4.52	**71.23**	1.01	7.85	8.86	0.95	1.23	2.18
Comparison to Thresholds								
BAAQMD 1999 Significance Thresholds[1]	15	15	15	N/A	N/A	N/A	N/A	N/A
Does Proposed Project exceed BAAQMD 1999 Thresholds?	No	**Yes**	No	N/A	N/A	N/A	N/A	N/A
BAAQMD 2011/2017 Significance Thresholds[1]	10.0	10.0	15.0	15.0	15.0	10.0	10.0	10.0
Does Proposed Project exceed BAAQMD 2011/ 2017 Thresholds?[1,2]	No	**Yes**	No	N/A	N/A	No	N/A	N/A

Note: **Bold** text indicates an exceedance of thresholds.

[1] BAAQMD Significance thresholds are detailed in Table 3.4-4.

[2] The comparisons to BAAQMD 2011/2017 thresholds are provided for informational purposes only. They are not used for determining significance.

Source: Appendix C

Table 3.4-7a. Daily Average Operational Emissions: Unmitigated—Pounds per Day

	ROG	NOx	Exhaust PM10	Fugitive Dust PM10	Total PM10	Exhaust PM2.5	Fugitive Dust PM2.5	Total PM2.5
OGV Transit and Maneuvering	7.47	161.45	1.82	N/A	1.82	1.68	N/A	1.68
OGV Hoteling	6.73	177.58	2.50	N/A	2.50	2.31	N/A	2.31
Tug (Assist + Barge)	6.22	44.78	1.52	N/A	1.52	1.52	N/A	1.52
Trucks – on-site	2.53	32.42	0.01	15.17	15.18	0.01	2.28	2.29
Trucks – off-site	0.53	35.99	0.36	3.16	3.52	0.34	0.75	1.09
Off-Road Equipment	9.74	11.69	0.70	9.02	9.71	0.64	1.35	1.99
Agg. Transfer	N/A	N/A	N/A	3.91	3.91	N/A	0.59	0.59
Agg. Stockpiles	N/A	N/A	N/A	16.25	16.25	N/A	2.46	2.46
Employee Commute	0.01	0.03	<0.01	0.06	0.06	<0.01	0.02	0.02
Total:	33.24	**463.93**	6.92	47.56	54.48	6.51	7.44	13.94
Comparison to Thresholds								
BAAQMD 1999 Significance Thresholds[1]	80	80	80	N/A	N/A	N/A	N/A	N/A
Does the Proposed Project exceed the 1999 BAAQMD Thresholds?	No	**Yes**	No	N/A	N/A	N/A	N/A	N/A
BAAQMD 2011/2017 Significance Thresholds[1]	54	54	82	82	82	54	54	54
Does the Proposed Project exceed the 2011/2017 BAAQMD Thresholds?[1,2]	No	**Yes**	No	N/A	N/A	No	N/A	N/A

Note: **Bold** text indicates an exceedance of thresholds.

[1] BAAQMD Significance thresholds are detailed in Table 3.4-4.

[2] The comparison to BAAQMD 2011/2017 thresholds is provided for informational purposes only. They are not used for determining significance.

Source: Appendix C

Table 3.4-7b. Daily Average Operational Emissions: Mitigated—Pounds per Day

	ROG	NOx	Exhaust PM10	Fugitive Dust PM10	Total PM10	Exhaust PM2.5	Fugitive Dust PM2.5	Total PM2.5
OGVs Transit and Maneuvering	7.47	161.45	1.82	N/A	1.82	1.68	N/A	1.68
OGV Hoteling	6.73	177.58	2.50	N/A	2.50	2.31	N/A	2.31
Tus (Assist + Barge)	6.22	44.78	1.52	N/A	1.52	1.52	N/A	1.52
Trucks – on-site	2.53	32.42	0.01	15.17	15.18	0.01	2.28	2.29
Trucks – off-site	0.53	35.99	0.36	3.16	3.52	0.34	0.75	1.09
Off-Road Equipment	5.50	4.36	0.25	9.02	9.27	0.23	1.35	1.58
Agg. Transfer	N/A	N/A	N/A	3.91	3.91	N/A	0.59	0.59
Agg. Stockpile	N/A	N/A	N/A	16.25	16.25	N/A	2.46	2.46
Employee Commute	0.01	0.03	<0.01	0.06	0.06	<0.01	0.02	0.02
Total:	29.00	**456.60**	6.47	47.56	54.03	6.10	7.44	13.53
Comparison to Thresholds								
BAAQMD 1999 Significance Thresholds[1]	80	80	80	N/A	N/A	N/A	N/A	N/A
Does the Proposed Project exceed the 1999 BAAQMD Thresholds?	No	**Yes**	No	N/A	N/A	N/A	N/A	N/A
BAAQMD 2011/2017 Significance Thresholds[1]	54	54	82	82	82	54	54	54
Does the Proposed Project exceed the 2011/2017 BAAQMD Thresholds? [1,2]	No	**Yes**	No	N/A	N/A	No	N/A	N/A

Note: **Bold** text indicates an exceedance of thresholds.

1. BAAQMD Significance thresholds are detailed in Table 3.4-4.

2. The comparison to BAAQMD 2011/2017 thresholds is provided for informational purposes only. They are not used for determining significance.

Source: Appendix C

As shown in Tables 3.4-6a and 3.4-7a, unmitigated emissions would be less than both the 1999 and 2011/2017 BAAQMD emission thresholds for all pollutants except for NOx. Annual and daily average NOx emission exceed the threshold and are potentially significant. To reduce NOx as well as other emissions, the following new project-specific mitigation measure would be implemented.

- **Mitigation Measure ERA AQ-1:** For Project operations, the applicant shall reduce NOx, PM (exhaust and fugitive dust) and GHG impacts as follows:

  a) NOx emissions from ocean-going vessels (OGVs) and tugs associated with loading and unloading of aggregate to and from the facility shall be offset with Bay Area Air Quality Management District (BAAQMD)-eligible Emission Reduction Credits (ERCs) at a ratio of 1.15:1.0 for NOx emissions, which ensures that these emissions are reduced to a net zero for their regional NOx contribution. These ERCs will need to be surrendered to BAAQMD as

part of the permit process (BAAQMD Regulation 2 Rule 2 2-2-302) prior to the start of operations. [It is unknown if other pollutants which are part of the eligible ERCs that would be secured for the Project would be similarly offset. The quantities of additional pollutants tied to the ERCs is unknown since other pollutant reductions may differ.]

b) As part of the annual Operations Air Quality Plan process described in section h below, the Applicant shall document that for the first two years of the lease term, a minimum of 25% of OGV calls are made by ships with engines meeting United States Environmental Protection Agency (USEPA) Tier 2 or higher tier emissions standards. Beginning in Year 3 of the lease term, the Applicant shall document that the minimum percentage of OGV calls made by USEPA Tier 2 or higher tier vessels is 30%. After Year 12 of the lease term, the minimum percentage of OGV calls made by USEPA Tier 2 or higher tier vessels shall increase to 40%.

c) On-site equipment: The Project's three front-end loaders shall be hybrid-electric and meet USEPA Tier 4 Final standards. The Project's sweeper, skid steer loader, and personnel lift shall be electric powered.

d) Within 24 months of the lease commencement date, all four (4) haul trucks to be used to transport material between the Project site and the Central Concrete plant in West Oakland and all future trucks for this route shall be electric-powered or other alternative technology approved by the Port, and loads shall be covered.

e) All haul truck tires shall be washed at the Project site exit.

f) The Applicant shall plant trees and other landscaping between the Project site and the West Oakland neighborhood to reduce transport of particulate matter with a diameter less than 2.5 microns (PM2.5) and maintain the added landscaping for the duration of the lease.

g) The Applicant shall sweep on-site roads a minimum of twice daily during all days of operation and shall comply with any additional measures to limit PM in the atmosphere through control of trackout of solid materials onto paved public roads pursuant to BAAQMD Regulation 6 Rule 6, 6-6-301.

h) Because additional NOx and PM mitigation measures may become feasible over the term of the proposed lease, the Applicant shall prepare and implement an Operations Air Quality Plan as specified below. The feasibility of potential additional mitigation elements to be added by the Operations Air Quality Plan shall be evaluated using the same feasibility standards the Port applies under its Seaport Air Quality 2020 and Beyond Plan, which outlines steps to determining feasibility that include assessing exposure reduction, affordability, cost effectiveness, commercial availability, operational feasibility, acceptability, and need.

The Applicant shall submit its initial Operations Air Quality Plan to the Port, which shall review, comment upon, and approve the Plan prior to the start of Project operations.

The Applicant shall conduct the following on an annual basis over the term of the lease:

- Reevaluate and update the Operations Air Quality Plan and submit it to the Port for review and approval.

- Provide to the Port a written equipment inventory in spreadsheet format of all equipment used the previous year; the inventory shall include the estimated hours of use, truck gate counts, and equipment fuel consumption by type and usage associated with the equipment.

- Meet with the Port to discuss the equipment inventory and evaluate the feasibility of: using least -polluting or zero -emissions equipment (for example, electric front-end loaders should they become commercially available); and exceeding BAAQMD best available control technology (BACT) and toxics best available control technology (TBACT) requirements (as defined by BAAQMD Regulation 2 Rule 2 New Source Review 2-2-301 and Regulation 2 Rule 5 New Source Review of Toxic Air Contaminants 2-5-301) for aggregate transfer operations and storage piles.

In addition, the Operations Air Quality Plan shall provide that in Years 1 through 6 of the lease, the Applicant shall, if determined to be feasible, implement a pilot project to test a capture and control system for OGV emissions. Regardless of whether such a pilot program is determined to be feasible, and whether, if the pilot program is implemented, the capture and control system is determined to be feasible for continued use, the Operations Air Quality Plan shall also outline an at-berth emission reduction plan as follows: Applicant shall demonstrate that in Years 7 through 12 of the lease, PM10 emissions from OGVs are reduced by 40% compared to those projected in the SEIR, and that after Year 12, PM10 emissions from OGVs are reduced by 65% compared to those projected in the SEIR. The Applicant will continue to meet the terms of the at-berth emissions reduction plan during the term of its lease even if even if such terms are more stringent than regulatory requirements.

- ~~**Mitigation Measure ERA AQ-1:** The Project applicant shall prepare and implement an Operations Air Quality Plan.~~

~~The Plan shall be reviewed and approved by the Port prior to start of Project operations. The Plan shall describe operational measures that the Project applicant will implement upon commencement of Project operations to reduce air emissions, including compliance with the BAAMQD 2017 CAP control measures for stationary sources. At a minimum, the Plan shall include a) purchase and use of hybrid-electric front-end loaders with engines conforming to USEPA Tier 4 Final (Tier 4F) emissions standards in place of conventional front-end loaders, b) purchase and use of an electric sweeper in place of a diesel-powered model, and c) sweeping of on-site roads a minimum of twice daily during all days of operation. In addition, the Project applicant shall provide to the Port an annual written inventory in spreadsheet format of all equipment used; the inventory shall include the estimated hours of use, truck gate counts, and fuel type and usage associated with the equipment. The Project applicant shall meet with the Port annually to discuss the inventory and evaluate the feasibility of using least-polluting or ZE equipment.~~

As shown in Tables 3.4-6b and 3.4-7b, application of Mitigation Measure ERA AQ-1 would reduce emissions of NOx as well as other pollutants from the Proposed Project. However, NOx emissions are projected to remain above BAAQMD emission thresholds.

In the 2002 EIR as Addended, air quality impacts were analyzed assuming that the Project site would be used as part of a container terminal. To determine if the significant and unavoidable NOx emissions from the Proposed Project represent a substantial increase in the severity of the previously identified significant impact of NOx emissions in the 2002 EIR as Addended, an analysis was performed to compare the level of emissions which might be reasonably expected from a container terminal with emissions from the Proposed Project.

Criteria, TAC, and GHG air pollutants from a container terminal would be produced by OGVs, assist tugs, cargo handling equipment (CHE), and drayage trucks. Emissions would be expected to scale with container throughput (measured in units of twenty-foot equivalents or TEUs) and number of vessel calls, which in turn determine the amount of CHE activity and number of truck trips. In this way, it is possible to estimate emissions from a container terminal with one berth and 18 acres of backlands at the same location as the Project.

Given uncertainty regarding the fraction of containers from a hypothetical container terminal that might be moved by rail, it is assumed for purposes of this comparison that all containers would be moved in or out of the Port by truck. The comparison of truck emissions between the Project and the hypothetical container terminal only includes the portion of each truck trip between the terminal and the freeway on-ramps. While most container trucks would travel further away from the Port to their next destinations than the aggregate haul trucks that would be used by the Project, that extra truck mileage would occur further away from West Oakland and thus not impact air quality in the vicinity of the Project site.

To reflect the uncertainty in vessel calls and container throughput at a hypothetical container terminal at Berths 20-22, emission estimates are presented here for a low container throughput scenario and a high container throughput scenario:

Low Container Throughput Scenario

- Container Throughput: 5,295 TEUs per acre based on recent TEUs per acre handled at the Port's Outer Harbor Intermodal Container Terminal (OICT; 290 acres). When scaled to the Project terminal size (18 acres), the annual throughput is 95,310 TEUs. (Port 2020).

- Ship Calls: 1,671 TEUs per call based on 919 vessels calls during calendar year 2019 at OICT. This equates to 57 calls when scaled to 95,310 TEUs.

High Container Throughput Scenario

- Container Throughput: 7,112 TEU per acre based on the "sustainable" throughput estimate developed by Tioga (Tioga Group 2020). When scaled to the Project terminal size (18 acres), the annual throughput is 128,016 TEUs.

- Ship Calls: 1,517 TEUs per call based on 2017 Port inventory. This equates to 84 calls when scaled by 128,016 TEUs.

Emissions were calculated for each of the above scenarios based on ship calls and TEU throughputs using the same methodology as for the 2017 Seaport Emissions Inventory with the following modifications:

- OGV emissions were calculated based on Automatic Identification System speed profiles and revised low-load adjustment factors as used to calculate the emissions in Table 8-1a of the 2017 Seaport Emissions Inventory. However, updated CARB emission factors as used to calculate the Project OGV emissions presented above were applied. Maximum use of shore power as required for container vessels by 2025 under the recently revised At Berth regulation was assumed.

- All Tier 2 tugs were assumed to be retrofitted or replaced by Tier 3 equivalent tugs.

- All CHE was assumed to be Tier 4 and one year old. Emission reductions from electrification beyond what existed in 2017 were not included as this is not a current regulatory requirement and would be too speculative. Only engine exhaust emissions were included in the comparison because re-entrained road dust was not included in the 2017 Seaport Emissions Inventory.

- Truck emissions were calculated for calendar year 2030, which was found to be the next year going forward with the lowest overall truck emissions as predicted by CARB's EMFAC2017 emissions model. Only engine exhaust and tire and brake wear emissions were included in the comparison because re-entrained road dust was not included in the 2017 Seaport Emissions Inventory. Expected emission reduction benefits from CARB's recently promulgated Advanced Clean Trucks regulation are not included in this estimate but would apply equally to container trucks or aggregate haul trucks.

Resulting emissions under these two scenarios are compared with emissions from the Project in **Table 3.4-8**. Under the high throughput scenario, emissions of all species are greater than Project emissions, ranging from 120% higher for DPM to 172% higher for PM2.5. Under the low container terminal scenario, emissions are higher than Project emissions for NOx, PM10, and PM2.5 but lower for DPM and GHGs (carbon dioxide equivalents or CO_2e). Overall, these results show that the significant and unavoidable impact from Project NOx emissions does not represent a substantial increase in the severity of the significant impact previously identified in the 2002 EIR as Addended. As described further below, emissions of DPM and GHG from the Project are projected to fall within the range of emissions that would be expected from use of the site as a container terminal and therefore do not represent a new or more severe impact than what was disclosed under the 2002 EIR as Addended.

Table 3.4-8. Comparison of emissions from container terminal scenario with Project operational emissions—Tons per Year

	NOx	PM10	PM2.5[1]	DPM	CO_2e
Low - High Container Throughput Scenario Range	67.99-100.18	0.91-1.35	0.84-1.25	0.60-0.89	5,966.57 - 8,347.50
Project	61.43	0.79	0.72	0.74	6,969.51

Note: Container truck trips assumed the same truck on-terminal and off-terminal driving speed, distance, and idling, including travel path(s) from the Project site to the nearest freeway ramp(s)as was assumed for Berths 20-24 in the Port's 2017 Maritime Emissions Inventory. The project emissions in Table 3.4-8 are adjusted to only account for truck emissions to the nearest freeway rather than the whole project trip indicated in Table 3.4-7b.

[1] Emissions do not include fugitive dust.

The Proposed Project would not increase the severity of, or result in a change in, the previously identified impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. Therefore, the impact remains **significant and unavoidable** as disclosed in the 2002 EIR as Addended due to NOx emissions.

Impact AIR-2: Would the Proposed Project expose sensitive receptors to substantial pollutant concentrations?

i. Would the Proposed Project result in potential to expose persons to substantial levels of TACs, such that the probability of contracting cancer for the MEI exceeds 10 in one million?

ii. Would the Proposed Project result in ground level concentrations of non-carcinogenic TACs such that the HI would be greater than 1 for the MEI?

The 2002 EIR as Addended concluded that construction, Port operations, and trucking activities would significantly increase fugitive dust and levels of other pollutants, potentially exposing pollution-sensitive receptors to substantial pollutant concentrations (Impact 4.4-1, Impact 4.4-2, and Impact 4.4-3). The Proposed Project would generate emissions of TACs, including DPM contained in diesel engine exhaust, other TACs from combustion sources, and respirable crystalline silica from construction aggregate transfer operations and fugitive dust from the Project site.

A project-level human HRA was conducted to evaluate the level of risk from potential exposures to TACs generated by construction and operation of the Proposed Project. The dose-response assessment and risk calculations were conducted in accordance with the most recent guidance for the preparation of HRAs from the California Office of Environmental Health Hazard Assessment (OEHHA 2015) using the Hot Spots Analysis and Reporting Program (HARP2) computer model (CARB 2020a). Details of the HRA inputs, methodology, and results are provided in Appendix D.

Results of the project-level HRA are summarized in terms of the excess cancer risk, the non-cancer Hazard Index for Chronic Effects (HIC), and the non-cancer Hazard Index for Acute Effects (HIA). DPM was determined to be the driving pollutant for cancer risk. Results are also presented for the annual average incremental increase in PM2.5 concentration for the maximum exposed individual resident (MEIR) and MEIW for informational purposes. In all cases, the MEIW is located approximately 300 feet east of the Project (see figures in Appendix D).

PROJECT CONSTRUCTION

In the unmitigated scenario, construction emissions were calculated using default equipment tier levels for the construction period (June 2021-May 2022) as described in Appendix C. Implementation of Mitigation Measure ERA AQ-2 would reduce exhaust emissions, including DPM emissions, from construction equipment. Data, methods, and assumptions used to calculate TAC emissions for both the unmitigated and mitigated scenarios are detailed in Appendix C.

Results from unmitigated and mitigated Proposed Project construction are summarized in **Tables 3.4-9a** and **3.4-9b**, respectively. Cancer risks and hazard indices are calculated to be below BAAQMD significance thresholds (10 in one million and 1.0, respectively) for both the unmitigated and mitigated construction activities when evaluated individually and not combined with past exposure from the OAB Area Redevelopment Plan construction. Although not required to reduce Project impacts below the significance threshold, the Port would require the implementation of Mitigation Measure ERA AQ-2 to address the Project construction contribution to the health impacts of exposures to overall OAB Area Redevelopment Plan construction, which are significant and unavoidable. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **significant and unavoidable** impact from OAB Area Redevelopment Plan construction disclosed in the 2002 EIR as Addended.

- **Mitigation Measure ERA AQ-2:** Project construction shall utilize construction equipment (excluding on-road trucks which must meet CARB on-road emission standards) meeting Tier 4 emission requirements with the possible exception of certain types of equipment (vibratory pile drivers and concrete saws), for which suitable Tier 4 equipment may not be available.[16]

In addition, for informational purposes as shown in Tables 3.4-9a and 3.4-9b, the PM2.5 concentration increment is below the 2011/17 BAAQMD CEQA Guidelines significance threshold of 0.3 µg/m^3 for both the unmitigated and mitigated construction activities**.**

Table 3.4-9a. HRA Results: Construction Emissions—Unmitigated

	MEIR	MEIW	2011/2017 BAAQMD Threshold[1]	Does Impact Exceed 2011/2017 Threshold?
Cancer Risk	7.6 in one million	1.5 in one million	10 in one million	No
HIC	0.004	0.047	1.0	No
HIA	0.035	0.035	1.0	No
PM2.5 Conc. Increase (unmitigated project)	0.022 µg/m^3	0.258 µg/m^3	0.3 µg/m^3	No

MEIR = maximum exposed individual resident, MEIW = maximum exposed individual worker

HIC = [Non-cancer] Hazard Index for Chronic Effects; HIA = Hazard Index for Acute Effects

Note: **Bold** text indicates an exceedance of thresholds.

[1] BAAQMD 1999 CEQA Guidelines do not include a significance threshold for health risk from construction emissions; therefore, the 2011/2017 thresholds were used.

16 Vibratory pile driving equipment is less common than loaders and backhoes and therefore Tier 4 compliant drivers may not be available. Concrete saws come in a range of horsepower outputs with some models falling below the ATCM applicability threshold that would require Tier 4 engines.

Table 3.4-9b. HRA Results: Construction Emissions—Mitigated

	MEIR	MEIW	2011/2017 BAAQMD Threshold[1]	Does Impact Exceed 2011/2017 Threshold?
Cancer Risk	2.8 in one million	0.7 in one million	10 in one million	No
HIC	0.002	0.017	1.0	No
HIA	0.018	0.018	1.0	No
PM2.5 Conc. Increase (mitigated project)	0.010 µg/m^3	0.116 µg/m^3	0.3 µg/m^3	No

MEIR = maximum exposed individual resident; MEIW = maximum exposed individual worker

HIC = [Non-cancer] Hazard Index for Chronic Effects; HIA = Hazard Index for Acute Effects

[1] BAAQMD 1999 CEQA Guidelines do not include a significance threshold for health risk from construction emissions; therefore, the 2011/2017 thresholds were used.

PROJECT OPERATIONS

Results of the HRA from the unmitigated Proposed Project operations are summarized in **Table 3.4-10a**. Unmitigated cancer risk at the MEIR receptor is greater than the BAAQMD significance threshold, while hazard indices are below the threshold. To reduce this impact, Mitigation Measure ERA AQ-1, which includes a requirement for the use of hybrid electric front-end loaders, would be implemented.

Results of the HRA for operation of the Proposed Project with Mitigation Measure ERA AQ-1 applied are shown in **Table 3.4-10b**. Mitigated cancer risks are estimated to be reduced below BAAQMD significance thresholds and do not represent a substantial increase in health impacts.

The 2002 EIR as Addended identified a significant and unavoidable impact of the OAB Area Redevelopment Plan related to exposure of sensitive receptors to substantial levels of TACs, with a lifetime cancer risk that exceeds the BAAQMD significance threshold. Cancer risk for the Proposed Project with mitigation applied is below the BAAQMD cancer risk thresholds and DPM emissions are the dominant contributor to the cancer risk. As shown above, DPM emissions for the Proposed Project are estimated to be in the range of DPM emissions for a container terminal scenario. This indicates that the Proposed Project would not result in a substantial change in severity of the previously identified **significant and unavoidable** cancer risk impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. Because the chronic and acute health impacts of the Proposed Project are substantially lower than BAAQMD thresholds, they also do not represent a substantial change in severity.

In both the unmitigated and mitigated cases, the PM2.5 increment at the MEIR and other residents in the West Oakland Community from the Proposed Project is below the BAAQMD significance threshold. In both the unmitigated and mitigated cases, the incremental PM2.5 concentration at the location of the MEIW located within Port property is calculated to exceed the 2011/17 BAAQMD significance threshold, resulting in an increase in PM2.5 concentration that is likely greater than the increase which would be expected from a container terminal. Model results show that 95% of the PM2.5 concentration at the MEIW is calculated to be from fugitive dust emissions associated with the aggregate transfer operations, storage piles, and fugitive dust from on-site vehicle travel, rather than from DPM.

Increases shown in Tables 3.4-10a and 3.4-10b are provided for informational purposes; they were not included in the 1999 BAAQMD thresholds. Some analysis of PM2.5 was presented in the 2002 EIR as

Addended. The 2002 EIR presented existing PM2.5 concentrations as measured by ambient air quality sensors at two locations near the Project[17]; measured concentrations from 1997 to 2000 were below national standards. The 2002 EIR included estimates of PM10 emissions from the OAB Area Redevelopment, noted that about 96% of these emissions would be PM2.5 emissions, and stated that PM10 emissions could serve as a conservative estimate of PM2.5 emissions. The 2002 EIR, however, did not provide an estimate of either PM10 or PM2.5 concentrations from the OAB Area Redevelopment. The 2012 Addendum (Table 3.3-13) estimated PM2.5 concentrations from the former OAB portion of the Redevelopment Area for both the 2002 Redevelopment Plan (0.47 $\mu g/m^3$) and the 2012 modifications to the OAB Redevelopment Area Plan (0.19 $\mu g/m^3$). These concentrations are the estimates at the nearest offsite sensitive receptor (MEIR). The 2012 Addendum did not estimate the PM2.5 concentration that might result from the entire OAB Area Redevelopment Plan, nor did it estimate PM2.5 concentration for the MEIW. Additionally, incremental PM2.5 concentrations for receptors on Port property were not analyzed in the 2002 EIR as Addended.

It is possible that the PM2.5 concentration generated by the entire OAB Area Redevelopment, with the 2012 modifications, would exceed the 0.3 $\mu g/m^3$ threshold in some locations within the Port area. The PM10 emissions estimated for the former OAB (Table 3.3-8 of the 2012 Addendum) represent approximately 10% of the estimated PM10 emissions for the entire Redevelopment Area (Table 4.4-5 in the 2002 EIR). PM2.5 emissions would be expected to have a similar ratio. Therefore, if the PM2.5 concentration impact had been fully evaluated in the 2002 EIR as Addended, there is a reasonable chance that a significant impact would have been identified; however, this remains uncertain since a detailed analysis was not conducted. It should be noted that current PM2.5 emissions from the Redevelopment Area are much less than what would have been estimated in the 2002 EIR due to improved drayage truck performance and shore power for ships, as demonstrated by the Port's reduction in DPM from 2005 to 2017, shown in Figure 3.4-2.

Table 3.4-10a. HRA Results: Operational Emissions—Unmitigated

	MEIR	MEIW	BAAQMD Threshold[1]	Does Impact Exceed 2011/2017 Threshold?
Cancer Risk (unmitigated project)	**11.7 in one million**	7.7 in one million	10 in one million	**Yes**
HIC	0.014	0.148	1.0	No
HIA	0.111	0.111	1.0	No
PM2.5 Conc. Increase	0.12 $\mu g/m^3$	**1.24 $\mu g/m^3$**	0.3 $\mu g/m^3$	**Yes**

MEIR = maximum exposed individual resident; MEIW = maximum exposed individual worker

HIC = [Non-cancer] Hazard Index, Chronic; HIA = Hazard Index, Acute

Note: **Bold** text indicates an exceedance of thresholds.

[1] 1999 and 2011/2017 BAAQMD thresholds for cancer risk and HI are the same; the 1999 guidance does not provide a significance threshold for PM2.5 concentration increase (threshold shown is from 2011/2017 guidance).

[17] One monitor was located on Port property near the intersection of 7th Street and Middle Harbor Road; the second was located near the intersection of Filbert and 24th streets in a residential area of West Oakland.

Table 3.4-10b. HRA Results: Operational Emissions–Mitigated

	MEIR	MEIW	BAAQMD Threshold[1]	Does Impact Exceed 2011/2017 Threshold?
Cancer Risk (mitigated Project)	7.2 in one million	3.3 in one million	10 in one million	No
HIC	0.013	0.129	1.0	No
HIA	0.066	0.066	1.0	No
PM2.5 Conc. Increase	0.11 µg/m^3	**1.13µg/m^3**	0.3 µg/m^3	**Yes**

MEIR = maximum exposed individual resident; MEIW = maximum exposed individual worker

HIC = [Non-cancer] Hazard Index, Chronic; HIA = Hazard Index, Acute

Note: **Bold** text indicates an exceedance of thresholds.

[1] 1999 and 2011/2017 BAAQMD thresholds for cancer risk and HI are the same; the 1999 guidance does not provide a significance threshold for PM2.5 concentration increase (threshold shown is from 2011/2017 guidance).

Impact AIR-3: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The Proposed Project was evaluated for consistency with applicable air quality plans, including the BAAQMD 2017 CAP, the Port's 2020 and Beyond Plan, and the WOCAP. These plans were evaluated with respect to the following criteria: 1) does the Project support the primary goals of the plan, 2) would the Project comply with applicable air quality measures contained in the plan, and 3) would the Project disrupt or hinder implementation of any control measures in the plan?

BAAQMD 2017 CLEAN AIR PLAN

The Proposed Project would meet all applicable air quality regulations and control measures for mobile and stationary sources included in the BAAQMD 2017 CAP described in Section 3.~~3~~4.1. Under Mitigation Measure ERA AQ-1, the Proposed Project's three front-end loaders would be hybrid-electric and meet USEPA Tier 4 Final standards; the Proposed Project's sweeper, skid steer loader, and personnel lift would be electric powered. ~~off-road equipment used in Project Operations would meet Tier 4 Final (4F) emission standards or better, including hybrid-electric front-end loaders and an electric sweeper.~~ In addition, ERA would track feasibility and commercial availability of using other least-polluting or ZE equipment. Under Mitigation Measure ERA AQ-2, construction equipment would be required to meet Tier 4 final emission standards when available.

Table 5-1 of the 2017 CAP contains proposed control measures for stationary sources. The Proposed Project would comply with the following applicable control measures:

- SS35 (PM from Bulk Material Storage, Handling and Transport, Including Coke and Coal) and SS36 (PM from Trackout):

  Proposed CAP Control Measures: 1) Develop BAAQMD rule limits to prevent and control wind-blown fugitive dust from bulk material handling operations. Establish enforceable visible emission limits to support preventive measures such as water sprays, enclosures and wind

barriers, and 2) Develop new BAAQMD rule to prevent mud/dirt and other solid trackout from construction, landfills, quarries and other bulk material sites.

Compliance Approach for the Proposed Project:

- Use water for dust control and perform percent moisture content testing on a regular basis for on-going evaluation of water spraying effectiveness;
- Limit vehicle traffic to paved or stabilized surfaces;
- Limit vehicle speeds to less than 15 miles per hour;
- Implement practices or physical barriers to prevent erosion of bulk materials onto vehicle pathways where vehicles can pulverize solids into fine particles;
- Provide a wind screen using stacked containers and/or fencing with screening around the north, south, and east perimeter of the Project site;
- Install a rumble strip after the truck scales to prevent PM trackout from the Project site; and
- Perform on-site street sweeping a minimum of twice daily.

- SS38: Fugitive Dust

  Proposed CAP Control Measure: Consider applying BAAQMD's proposed fugitive dust visible emissions limits to a wider array of sources.

  Compliance Approach: (See measures for SS35)

Table 5-2 of the 2017 CAP contains control measures for transportation. The Proposed Project would comply with the following applicable control measures:

- TR19: Medium- and Heavy-Duty Trucks

  Proposed CAP Control Measure: Directly provide, and encourage other organizations to provide, incentives for the purchase of 1) new trucks with engines that exceed CARB's 2010 NOx emission standards for heavy-duty engines, 2) new hybrid trucks, and 3) new ZE trucks. The BAAQMD will work with truck owners, industry, CARB, the California Energy Commission, and others to demonstrate additional battery-electric and hydrogen fuel cell ZE trucks.

  Compliance Approach for the Proposed Project: Trucks would be required to comply with CARB Truck and Bus Regulation, the Advanced Clean Truck rule, and the Drayage Truck Program. Trucks will be fitted with radio frequency identification (RFID) tags to ensure compliance.

- TR22: Construction, Freight and Farming Equipment.

  Proposed CAP Control Measures: Provide incentives for the early deployment of electric, Tier 3 and 4 off-road engines used in construction, freight, and farming equipment. Support field demonstrations of advanced technology for off-road engines and hybrid drivetrains.

Compliance Approach for the Proposed Project: All on-site equipment would be at least Tier 4F. Hybrid-electric front-end loaders and an electric sweeper would be used, as required in Mitigation Measures ERA AQ-1 and ERA AQ-2.

- TR20: Ocean Going Vessels

  Proposed CAP Control Measures: Replicate the Green Ship Program that has been implemented at the ports of Los Angeles and Long Beach. Financial incentives for cleaner Tier 2 and Tier 3 oceangoing vessels to call at the ports serve as the basis of the Program. The Program was initiated as part of the San Pedro Bay Ports Clean Air Action Plan. This measure also recognizes the need to monitor progress under such programs and augment them as necessary to ensure sufficient results.

  Compliance Approach for the Proposed Project: The Proposed Project would include a lease requirement that at least 25 percent of vessels delivering construction aggregate to the ERA terminal conform to Tier 2 or better emission standards in years 1 and 2 of the lease. This would increase to 30% in years 3 through 12, and would further increase to 40% under any lease term extensions.

- TR21: Commercial Harbor Craft

  Proposed CAP Control Measures: Focus on assisting fleets to achieve early compliance with CARB harbor craft air toxic control measure (ATCM) and supporting research efforts to develop and deploy more efficient engines and cleaner, renewable fuels for harbor craft.

  Compliance Approach for the Proposed Project: Under a resolution approved by the Board of Port Commissioners on July 23, 2020, amending the ~~Near-~~Near-Term Action Plan (NTAP) of the 2020 and Beyond Plan, the Port will be working to facilitate tug engine retrofits via application of BAAQMD incentive funding aimed at early compliance with the current CARB harbor craft ATCM. This action is being implemented separately from the Proposed Project.

As described above, the Proposed Project has proposed methods to address all applicable control measures of the CAP; however, it is unknown at this time if these measures would be deemed by BAAQMD to be sufficient and in compliance with future regulations. It should be noted that the fugitive dust from the Proposed Project is calculated to result in ambient PM2.5 concentrations above the BAAQMD risk and hazards threshold of 0.3 $\mu g/m^3$ in the immediate vicinity of the Project site within the Port area only. As noted in Tables 3.4-6a, 3.4-6b, 3.4-7a, and 3.4-7b, operation of the Project would result in NOx emissions that would exceed the BAAQMD significance thresholds. The 1999 and 2011 BAAQMD Thresholds for project level operational impacts are set at a level at which the cumulative impact of exceeding these thresholds might have an adverse impact on the region's attainment of air quality standards. Application of Mitigation Measures ERA AQ-1 and ERA AQ-2 would reduce NOx emissions, but NOx emissions would nevertheless remain above the significance thresholds. As a result, operation of the Proposed Project would not be fully consistent with the goal of the CAP to attain air quality standards. As shown in Table 3.4-8, NOx emissions from the Proposed Project would be similar to or less than the NOx emissions from a hypothetical container terminal at the same site. This finding is consistent with the 2002 EIR as Addended, which concluded that the OAB Area Redevelopment would result in criteria pollutant emissions that exceed the BAAQMD thresholds and would therefore be inconsistent with the goal of the CAP to attain air quality standards.

PORT OF OAKLAND SEAPORT AIR QUALITY 2020 AND BEYOND PLAN

The 2020 and Beyond Plan provides a common framework and guidance for stakeholders involved in achieving the vision of a ZE Seaport. With respect to air quality, the 2020 and Beyond Plan's goals are to "minimize emissions of criteria air pollutants and TACs, with a focus on reducing DPM emissions, thereby reducing community exposure to pollutants that are harmful to public health" and to "reduce GHG emissions". Other goals in the 2020 and Beyond Plan include keeping the Port competitive and financially sustainable, building and strengthening partnerships, and providing opportunities for meaningful stakeholder engagement. The 2020 and Beyond Plan lays out a NTAP for the period 2019 - 2023 that contains 37 Implementing Actions designed to achieve these goals, including suggested actions that are currently going through the screening process described in the Plan, and programmed actions for which funding has been allocated. As suggested actions proceed through the screening process, some of them will become programmed actions. Implementing Actions in the NTAP include an increased use of hybrid (near-zero-emission) and battery electric (ZE) equipment and trucks, increased capacity and reliability of the Port electrical grid and battery charging infrastructure, and increased percentage of vessel visits utilizing shore power by vessels that are appropriately equipped.

The Proposed Project would support the goals of the Plan by adhering to all applicable programmed implementing actions. More specifically, the mitigated Project would make use of hybrid front-end loaders and a ZE electric sweeper and the Applicant would meet annually with the Port to discuss the feasibility of utilizing least-polluting or ZE equipment (Mitigation Measure ERA AQ-1).

WEST OAKLAND COMMUNITY ACTION PLAN

Of the 89 strategies for reducing local community exposures to hazardous air pollutants contained in the WOCAP, 11 were designated as Port-related strategies; these 11 strategies consist of 17 distinct actions and are summarized in **Table 3.4-11**.

Table 3.4-11. Port-Related WOCAP Strategies

WOCAP #	Strategy Type	Action Description
5	Land Use	Accelerate Relocation of Non-Conforming Truck Businesses
19	Land Use	Adopt Electrical Infrastructure Plan Incorporating Trucks
21	Land Use	Create Sustainable Freight Advisory Committee
26	Land Use	Establish Dedicated Truck Parking and Container Staging in Logistics Area
37	Mobile Sources	Set Interim Targets for ZE Trucks Out to 2035
37	Mobile Sources	Commercialization Effort for ZE Trucks
37	Mobile Sources	Increase Weight Limit for Single Axle ZE Trucks
37	Mobile Sources	Develop Investment Plan for Port Infrastructure
37	Mobile Sources	Study Favorable Time-of-Day Electricity Rate Structure for Truckers
42	Mobile Sources	Award Long-Term Lease for Trucker Services Center
43	Mobile Sources	Study Effects of Larger Vessels on Truck Traffic
43	Mobile Sources	Study Feasibility of Off-Dock Yard Using ZE Trucks
43	Mobile Sources	Study of Efficiency Gains from Increased Truck Double-Cycling
50	Mobile Sources	Use BAAQMD Incentives to Upgrade Tugs and Barges

WOCAP #	Strategy Type	Action Description
63	Mobile Sources	Implement a Clean Ship Program
64	Mobile Sources	Implement a Clean Locomotive Program
65	Mobile Sources	Study Feasibility of Electric Switchers at Burlington Northern Santa Fe Corp (BNSF) and Oakland Global Rail Enterprise (OGRE).

Similar to the 2020 and Beyond Plan Implementing Actions, these strategies primarily focus on increased use of low and ZE equipment and vehicles. As noted above, the Proposed Project would use hybrid front-end loaders and a ZE electric sweeper and the Applicant would meet annually with the Port to discuss the feasibility of utilizing least-polluting or ZE equipment (Mitigation Measure ERA AQ-1). Besides improvements to on-shore equipment and vehicles, the use of BAAQMD incentives to repower or retrofit tugs, which assist OGVs calling the Project site, would reduce emissions associated with vessel calls to the Project site. The Proposed Project would not impede implementation of any of the Port-related WOCAP measures. The Proposed Project would also include a lease requirement that at least 25 percent of vessels delivering construction aggregate to the ERA terminal conform to Tier 2 or better emission standards in years 1 and 2 of the lease (increasing to 30% under years 3 through 12, and to 40% under any lease extension), which supports Strategy 63, Implement Clean Ship Program: The Port implements a Clean Ship Program to increase the frequency of visits by ships with International Maritime Organization Tier 2 and Tier 3 engines.

As noted in the discussions of each applicable air quality plan above, the Proposed Project includes proposed mitigation measures that address all applicable air quality plan control measures. However, the Proposed Project would not be fully consistent with the goal of the BAAQMD CAP to attain air quality standards because NOx emissions from the Project after mitigation would exceed the BAAQMD significance thresholds and ambient PM2.5 concentrations in the immediate vicinity of the Project are estimated to exceed the BAAQMD 2011/2017 significance threshold for MEIW due to fugitive dust emissions, thus potentially contributing to nonattainment of the AAQS. As such, the impact of the OAB Area Redevelopment Plan as modified by the Proposed Project is **significant and unavoidable**. This Finding is consistent with conclusions in the 2002 EIR as Addended that the OAB Redevelopment Plan would conflict with the BAAQMD CAP. Thus, there is no new impact and no substantial change in severity of the previously disclosed impact in that no new air quality plans are inconsistent. As discussed above, a complete analysis of PM2.5 impacts for the full Redevelopment Area was not required and thus not presented in the 2002 EIR as Addended. However, there is a reasonable chance that a significant impact would have been identified for PM2.5 concentration at the MEIW and therefore as a result a conflict with the BAAQMD CAP for PM2.5 would also apply to the OAB Area Redevelopment Plan described in the 2002 EIR as Addended. Thus, it is not unreasonable to conclude that the projected PM2.5 impact of the Proposed Project does not result in an increase in severity of the existing impact. However, in an abundance of caution and due to uncertainty from lack of detailed analysis in 2002 EIR as Addended, the SEIR concludes that the PM2.5 emissions at the MEIW are an increase in severity of the existing impact.

Impact AIR-4: Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The 2002 EIR as Addended concluded that construction and operational activities would significantly increase levels of fugitive dust and other pollutants (Impact 4.4-1, Impact 4.4-2, Impact 4.4-3, and Impact 4.4-5). The Proposed Project is located within the Bay Area federal and state nonattainment area

for the ozone and PM2.5 NAAQS; and state nonattainment for PM10. Construction and operation of the Proposed Project would result in the release of emissions that could potentially contribute to these existing air quality standard violations. Based on the BAAQMD 1999 CEQA Guideline significance thresholds, a project that would result in operational emissions of ROG, NOx, or PM10 of 15 tpy or greater or 80 pounds per day or greater has the potential to contribute substantially to existing or projected air quality violations. For informational purposes only, the corresponding BAAQMD 2011/2017 significance thresholds are 10 tpy for ROG, NOx, and exhaust PM2.5 and 15 tpy for exhaust PM10; daily average thresholds are 54 pounds per day for ROG, NOx, and exhaust PM2.5 and 82 pounds per day for exhaust PM10.

PROJECT CONSTRUCTION

Construction of the Proposed Project would result in emissions of fugitive dust from grading, surface preparation, and other construction activities along with construction equipment exhaust emissions of criteria pollutants. As discussed above and shown in Table 3.4-5a, construction emissions of ROG, NOx, and PM10 would be below the BAAQMD thresholds. Therefore, the Proposed Project would not substantially increase the severity of the previously identified **significant and unavoidable** impact of the OAB Area Redevelopment Plan construction emissions disclosed in the 2002 EIR as Addended.

PROJECT OPERATIONS

As shown in Tables 3.4-6a and 3.4-7a, operation of the Proposed Project would result in emissions that are below BAAQMD's emission significance thresholds for ROG, PM10, and PM2.5. Annual and daily emissions of NOx would be above the significance threshold. In addition, as described Impact AIR-2, the PM2.5 concentrations at the MEIW, located within the Port area in the vicinity of the Project site, would be greater than BAAQMD's 2011/2017 0.3 $\mu g/m^3$ threshold (Tables 3.4-10a and 3.4-10b). Although the Project operations PM2.5 emissions are below the emission threshold (Tables 3.4-6a, 3.4-6b, 3.4-7a, and 3.4-7b), the predicted PM2.5 concentration greater than 0.3 $\mu g/m^3$ in the immediate vicinity of the Project at the MEIW due to dust emissions suggests that the Project could contribute to a potential localized exceedance of the PM2.5 ambient air quality standard. The impact of the OAB Area Redevelopment Plan as modified by the Project would therefore be potentially significant. Although application of Mitigation Measure ERA AQ-1 would reduce operational emissions from the Proposed Project as shown in Tables 3.4-6b and 3.4-7b, NOx emissions would remain above the threshold. NOx emissions from the Proposed Project may, when combined with ROG emissions from the Proposed Project or other sources, contribute to formation of ozone and secondary (i.e., not directly emitted) PM2.5. The San Francisco Bay Area Air Basin is currently in nonattainment of both the ozone and PM2.5 NAAQS and CAAQS. As a result, NOx emissions from operation of the Project may contribute substantially to the existing and any future ozone and PM2.5 air quality violations. Therefore, impacts of the OAB Area Redevelopment Plan as modified by the Proposed Project would remain **significant and unavoidable** as disclosed in the 2002 EIR as Addended. As described under Impact AIR-1 above, NOx emissions from the Proposed Project would not result in a substantial increase in the severity of the previously identified impact since the proposed change in cargo type at the Project site would not increase NOx emissions. However, the PM2.5 concentration impact from the Proposed Project would represent an increase in severity for workers located on Port Property in the immediate vicinity of the Project site, but not in the West Oakland Community. This impact is driven by fugitive dust from the aggregate transfer operations, storage piles, and on-site vehicle travel.

Short-term exposures (lasting for a few hours) to ozone at levels above the NAAQS or CAAQS can result in health effects including aggravated asthma, acute bronchitis, respiratory symptoms, decreased lung

function, heart attacks, and premature mortality (BAAQMD 2017b, USEPA 2020). When inhaled, PM2.5 and PM10 can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM2.5 and PM10 can increase the number and severity of asthma attacks and cause or aggravate bronchitis and other lung diseases. Whereas PM10 tends to collect in the upper portion of the respiratory system, PM2.5 is small enough to penetrate deeper into the lungs and damage lung tissues. Additional health effects of PM2.5 include, increased blood pressure, heart disease, heart attack, stroke, and premature mortality (BAAQMD, 2017b; U.S. EPA, 2020).

Impact AIR-5: Would the Proposed Project contribute to carbon monoxide concentrations exceeding the State ambient air quality standards of 9 ppm averaged over 8 hours and 20 ppm for 1 hour?

The 2002 EIR as Addended concluded that construction and building operation activities could emit levels of CO that would exceed established thresholds (Impact 4.4-2 and Impact 4.4-5). Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. As a result of the lower monitored ambient CO air pollution levels, BAAQMD revised its conservative CO screening methodology, which provides an indication of whether the implementation of a project would result in significant CO emissions. According to BAAQMD's 2011/2017 CEQA Guidelines, a proposed project would result in a less-than-significant impact to localized CO concentrations (in other words, the significance thresholds in Table 3.4-4 would be presumed not to be exceeded) if the following screening criteria are met:

1) 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.

2) Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

3) The project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour when vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

As this methodology was developed based on the latest monitoring data and latest emission technology, this screening methodology would apply to a project evaluated under either the 1999 Thresholds or 2011/2017 Thresholds. Analysis of CO impacts from the OAB Area Redevelopment Plan in the 2012 Addendum determined that the impact based on the above thresholds was less than significant.

The Project site is not located in an area where vertical or horizontal mixing is substantially limited. The traffic analysis performed as part of this ~~Draft~~ Final SEIR indicates that the Proposed Project would, with mitigation measures applied, not cause the LOS to significantly deteriorate at affected intersections (see Section 3.11, "Transportation"). Therefore, the three screening criteria are met in accordance with the BAAQMD CEQA Guideline. As a result, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR, as Addended.

Impact AIR-6: Would the Proposed Project result in a substantial increase in diesel emissions?

The 2002 EIR as Addended concluded that construction and operations of the OAB Redevelopment Plan could substantially increase diesel emissions (Impact 4.4-2 and Impact 4.4-3). As described in the analysis above, the Proposed Project would generate exhaust PM10 emissions, much of which would be diesel emissions. These diesel emissions are below the PM10 emission thresholds and the risk and hazard thresholds for cancer, chronic health impacts, and acute health impacts after implementation of mitigation measures AQ-1 and AQ-2, which require the use of lower DPM emitting equipment during construction and operation. In addition, DPM is not the primary contributor to the PM2.5 concentration exceedance noted above. As discussed under Impact AIR-1, emissions of DPM from the Proposed Project are projected to be similar to or less than the emissions expected from use of the site as a container terminal. In addition, the cancer risk for the Project on its own after mitigation is below the cancer risk threshold. Therefore, the Project emissions do not by themselves represent a substantial increase in diesel emissions. Thus, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **significant and unavoidable** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

Table 3.4-12 lists those impacts from the 2002 EIR as Addended that apply to the Proposed Project; indicates SCA and/or mitigation measures that would apply to the Proposed Project; and indicates whether a new significant impact or a substantial increase in the severity of an identified impact would occur. No new significant impacts or substantial increase in the severity of an impact related to air quality not previously disclosed in the 2002 EIR as Addended would occur with implementation of the Proposed Project.

Table 3.4-12. Impacts Related to Air Quality

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact AIR-1: Would the Project result in construction emissions or total operational emissions exceeding BAAQMD recommended thresholds of ROG, NOx, or PM10 of 15 tons per year (tpy) or greater or 80 pounds per day or greater?	SCA AIR-1, SCA AIR-2, and Mitigation Measure ERA AQ-1 (NEW)	Proposed Project would exceed the BAAQMD thresholds for NOx emissions	Significant and unavoidable (NOx emissions)	No
Impact AIR-2: Would the Proposed Project expose sensitive receptors to substantial pollutant concentrations? i. Would the Proposed Project result in the potential to expose persons to toxic air contaminants (TACs), such that the probability of contracting cancer for the maximally exposed individual (MEI) exceeds 10 in one million? ii. Would the Proposed Project result in ground level concentrations of non-carcinogenic TACs such that the Hazard Index (HI) would be greater than 1 for the MEI?	Mitigation Measure ERA AQ-1 (NEW) and Mitigation Measure ERA AQ-2 (NEW)	Proposed Project would expose sensitive receptors to substantial pollutant concentrations	Significant and unavoidable	No (For informational purposes, PM2.5 is a change in severity.)

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact AIR-3: Would the Proposed Project conflict with or obstruct implementation of the applicable air quality plan?	Mitigation Measure ERA AQ-1 (NEW)	Proposed Project would exceed BAAQMD thresholds for NOx and PM2.5 concentrations at MEIW	Significant and unavoidable (NOx and PM2.5 concentration at MEIW)	Yes (PM2.5) in an abundance of caution and due to uncertainty from lack of detailed analysis in 2002 EIR as Addended
Impact AIR-4: Would the Proposed Project violate any air quality standard or contribute substantially to an existing or projected air quality violation	SCA AIR-2 and Mitigation Measure ERA AQ-1 (NEW)	Proposed Project would exceed BAAQMD thresholds for NOx and PM2.5 concentrations at MEIW	Significant and unavoidable (NOx and PM2.5 concentration at MEIW)	Yes (PM2.5) in an abundance of caution and due to uncertainty from lack of detailed analysis in 2002 EIR as Addended
Impact AIR-5: Would the Proposed Project contribute to carbon monoxide concentrations exceeding the State ambient air quality standards of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for 1 hour?	None	Proposed Project would not exceed carbon monoxide thresholds	Less than significant	No
Impact AIR-6: Would the Proposed Project result in a substantial increase in diesel emissions?	Mitigation Measure ERA AQ-1 (NEW)~~,~~ and Mitigation Measure ERA AQ-2 (NEW)	Proposed Project would generate diesel emissions below existing thresholds	Significant and unavoidable	No

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3.5 GEOLOGY AND SOILS

This section identifies potential geology impacts of the Proposed Project; evaluates whether the Proposed Project would result in new significant impacts related to geology and soils not identified in the 2002 EIR as Addended for the OAB Area Redevelopment Plan; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to Project changes, changes in setting, or new information. Previously identified mitigation measures and SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

A preliminary *Geotechnical Conditions Report* (ENGEO Incorporated [ENGEO] 2018) (Appendix E) was prepared in December 2018 to assess the current geotechnical conditions at the Project site. The findings of the Geotechnical Conditions Report (Appendix E) and the assessment of geologic conditions at this portion of the OAB Redevelopment Area conducted as part of the 2002 EIR as Addended are summarized below.

3.5.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

Regulations relevant to geology and soils that have occurred since the 2012 Addendum include the following:

- Title 24 of the California Building Code (CBC) was updated in 2013, 2016, and 2019. The 2019 version of the CBC was adopted by the State of California on January 1, 2020. The CBC sets minimum requirements for building design and construction. Relevant provisions of the CBC require the preparation of foundation and soils reports and other geotechnical reports that address site-specific conditions, potential hazards, and required methods and design parameters for remediating and protecting against potential seismic hazards.

UPDATED ENVIRONMENTAL SETTING

Existing conditions relating to geology and soils have not changed substantially from the regional and local setting identified in the 2002 EIR as Addended.

The Project site is located within a seismically active region of the Bay Area consisting of the San Andreas Fault system. However, no known active faults exist within the Project site. The Project site is relatively level with a ground surface level that ranges from approximately 12 to 15 feet above mean sea level (Appendix E). The geology underlying the Project site from youngest to oldest consists of artificial fill (or hydraulically placed fill), the most surficial layer, typically dredged material from the Bay placed on pre-existing marshland; young Bay mud deposits, which are highly compressible clays; Merritt sand, as quaternary deposit that underlies the Bay mud; and San Antonio formation, which consists of alluvium from alluvial fans, floodplains, lakes, and beaches (Appendix E). **Table 3.5-1** summarizes the thickness of the subsurface materials underlying the Project site in stratigraphic order from youngest to oldest. Details about the material types can be found in Appendix E.

Table 3.5-1. Subsurface Materials Underlying the Project Site

Material	Thickness (feet) of the Subsurface Materials from Youngest to Oldest
Hydraulically Placed Fill	10 to 30
Young Bay Mud	10 to ~~25~~30
Merritt Sand/San Antonio Formation	>50

Source: Appendix E

3.5.2 Summary of Prior Analysis

Impacts and mitigation measures in the 2002 EIR as Addended were reviewed for potential applicability to the Proposed Project. Impacts and the associated mitigation measures that may apply to the Proposed Project area summarized below.

The 2002 EIR as Addended concluded that potentially significant impacts related to seismic-related ground shaking, seismic-related ground failure, erosion, expansive soils, and unknown underground facilities in the OAB Redevelopment Area would be reduced to less-than-significant levels:

- **Impact 4.13-1:** Redevelopment could expose increased numbers of people and structures to strong seismic ground shaking.
- **Impact 4.13-2:** Redevelopment could expose increased numbers of people or structures to seismic related ground failure, including liquefaction, lateral spreading, subsidence or collapse.
- **Impact 4.13-4:** Under certain conditions, disturbance of soils during construction could result in erosion.
- **Impact 4.13-5:** Redevelopment could occur on expansive soils.

For the potentially significant impacts related to seismic ground shaking, seismic-related ground failure, and expansive soils the 2002 EIR as Addended identified the following mitigation measure and SCAs to reduce impacts to a less-than-significant level:

- **Mitigation Measure 4.13-1:** Redevelopment elements shall be designed in accordance with criteria established by the UBC, soil investigation and construction requirements established in the Oakland General Plan, the Bay Conservation and Development Commission Safety of Fill Policy, and wharf design criteria established by the Port or City (depending on the location of the wharf). *(Note: This mitigation measure is applicable to the Proposed Project using the 2019 version of the California Building Code and the International Building code (IBC) to replace the UBC.)*

- **SCA GEO-1: Erosion and Sedimentation Control Plan:**

  Prior to any grading activities:

  The project applicant shall obtain a grading permit if required by the Oakland Grading Regulations pursuant to Section 15.04.660 of the Oakland Municipal Code. The grading permit application shall include an erosion and sedimentation control plan for review and approval by the Building Services Division. The erosion and sedimentation control plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks or receiving waters as a result of conditions created by grading operations. The plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the Director of Development or designee. The plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

  Ongoing throughout grading and construction activities:

  The project applicant shall implement the approved erosion and sedimentation plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Building Services Division.

  (Note: For projects at the Port, the erosion and sedimentation control plan would ~~also~~ be submitted to the Port for review and approval.)

- **SCA GEO-2: Soils Report:** A preliminary soils report for each construction site within the project area shall be required as part of this project and submitted for review and approval by the Building Services Division. The soils reports shall be based, at least in part, on information obtained from on-site testing. Specifically, the minimum contents of the report should include:

  a) Logs of borings and/or profiles of test pits and trenches:

     i. The minimum number of borings acceptable, when not used in combination with test pits or trenches, shall be two (2), when in the opinion of the Soils Engineer such borings shall be sufficient to establish a soils profile suitable for the design of all the footings, foundations, and retaining structures.

     ii. The depth of each boring shall be sufficient to provide adequate design criteria for all proposed structures.

     iii. All boring logs shall be included in the soils report.

b) Test pits and trenches:

   i. Test pits and trenches shall be of sufficient length and depth to establish a suitable soils profile for the design of all proposed structures.

   ii. Soils profiles of all test pits and trenches shall be included in the soils report.

A plat shall be included, which shows the relationship of all the borings, test pits, and trenches to the exterior boundary of the site. The plat shall also show the location of all proposed site improvements. All proposed improvements shall be labeled.

Copies of all data generated by the field and/or laboratory testing to determine allowable soil bearing pressures, sheer strength, active and passive pressures, maximum allowable slopes where applicable and any other information which may be required for the proper design of foundations, retaining walls, and other structures to be erected subsequent to or concurrent with work done under the grading permit.

Soils Report. A written report shall be submitted which shall include, but is not limited to, the following:

a) Site description;

b) Local and site geology;

c) Review of previous field and laboratory investigations for the site;

d) Review of information on or in the vicinity of the site on file at the Information Counter, City, Office of Planning and Building;

e) Site stability shall be addressed with particular attention to existing conditions and proposed corrective attention to existing conditions and proposed corrective actions at locations where land stability problems exist;

f) Conclusions and recommendations for foundations and retaining structures, resistance to lateral loading, slopes, and specifications, for fills, and pavement design as required;

g) Conclusions and recommendations for temporary and permanent erosion control and drainage. If not provided in a separate report they shall be appended to the required soils report;

h) All other items which a Soils Engineer deems necessary;

i) The signature and registration number of the Civil Engineer preparing the report.

The Director of Planning and Building may reject a report that she/he believes is not sufficient. The Director of Planning and Building may refuse to accept a soils report if the certification date of the responsible soils engineer on said document is more than three years old. In this instance, the Director may be required that the old soils report be recertified, that an addendum to the soils report be submitted, or that a new soils report be provided.

(Note: For projects at the Port, the soils report would ~~also~~ be submitted to the Port for review and approval.)

- **SCA GEO-3: Geotechnical Report:**

a) A site-specific, design level, landslide or liquefaction geotechnical investigation for each construction site within the project area shall be required as part of this project and submitted for review and approval by the Building Services Division. Specifically:

i. Each investigation shall include an analysis of expected ground motions at the site from identified faults. The analyses shall be accordance with applicable City ordinances and polices, and consistent with the most recent version of the California Building Code, which requires structural design that can accommodate ground accelerations expected from identified faults.

ii. The investigations shall determine final design parameters for the walls, foundations, foundation slabs, surrounding related improvements, and infrastructure (utilities, roadways, parking lots, and sidewalks).

iii. The investigations shall be reviewed and approved by a registered geotechnical engineer. All recommendations by the project engineer, geotechnical engineer, shall be included in the final design, as approved by the City.

iv. The geotechnical report shall include a map prepared by a land surveyor or civil engineer that shows all field work and location of the "No Build" zone. The map shall include a statement that the locations and limitations of the geologic features are accurate representations of said features as they exist on the ground, were placed on this map by the surveyor, the civil engineer or under their supervision, and are accurate to the best of their knowledge.

v. Recommendations that are applicable to foundation design, earthwork, and site preparation that were prepared prior to or during the projects design phase, shall be incorporated in the project.

vi. Final seismic considerations for the site shall be submitted to and approved by the City Building Services Division prior to commencement of the project.

vii. A peer review is required for the Geotechnical Report. Personnel reviewing the geologic report shall approve the report, reject it, or withhold approval pending the submission by the applicant or subdivider of further geologic and engineering studies to more adequately define active fault traces.

b) Tentative Tract or Parcel Map approvals shall require, but not be limited to, approval of the Geotechnical Report.

(Note: For projects at the Port, the geotechnical report would ~~also~~ be submitted to the Port for review and approval).

For the potentially significant impact related to erosion (Impact 4.13-4), the 2002 EIR as Addended identified the following SCA to reduce impacts to a less-than-significant level:

- **SCA GEO-1: Erosion and Sedimentation Control Plan:** Refer to text above.

- **SCA HYD-1: Stormwater Pollution Prevention Plan (SWPPP):** (*Note: This SCA would be superseded by the Port's Development Permit, which requires a Small Project SWPPP for projects that disturb less than one acre.*)

The Proposed Project differs from the OAB Area Redevelopment Plan by changing a portion of a terminal designated for container cargo to bulk construction aggregates. The placement of the construction aggregate stockpiles and associated compaction and construction of the Project components with heavy construction equipment (i.e., pile driving) would have the potential to expose people or structures to strong seismic ground shaking; seismic related ground failure, including liquefaction, lateral spreading, and differential settlement; and expansive soils. In addition, construction activities associated with the Proposed Project would have the potential to result in soil erosion. Potential impacts associated with the Proposed Project area discussed in more detail below.

3.5.3 Impacts and Mitigation Measures

The Proposed Project was evaluated against applicable significance criteria from the 2002 EIR as Addended. As explained below, a recent decision by the California Supreme Court affects how the criteria are applied. The Proposed Project would have a significant impact on the environment if it would:

- Directly or indirectly cause substantial risk of loss, injury or death involving:

    i. Strong seismic ground shaking, or

    ii. Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, and collapse;

- Result in substantial soil erosion or loss of topsoil; or

- Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property.

While the analysis below evaluated impacts pursuant to the significance criteria used in the 2002 EIR as Addended, the analysis also took into account the 2015 California Supreme Court decision stating that CEQA does not generally operate "in reverse" (*Cal. Building Industry Ass'n v. Bay Area Air Quality Mgmt. Dist.,* 62 Cal.4th 369, Case No. S213478). That is, CEQA generally does not require analysis of the effects of the existing environment on future users or residents of a proposed project. With respect to geology and soils, this means that a proposed project that places structures or people in areas subject to geological hazards would not necessarily result in significant impact, unless it were to exacerbate these existing hazards. Therefore, the impacts analysis below focuses on the extent to which the Proposed Project could exacerbate any existing geologic hazards that may be present within the impact area.

IMPACTS

Impact GEO-1: Would the Proposed Project directly or indirectly cause substantial risk of loss, injury or death involving:

i. Strong seismic ground shaking?

The 2002 EIR as Addended concluded that redevelopment could expose increased numbers of people and structures to strong seismic ground shaking (Impact 4.13-1). The Project site is located within a seismically active region where numerous small earthquakes occur each year. Seven active faults are located within 30 miles of the Project site. Given the proximity of numerous active faults, the entire Oakland area could potentially be subject to strong seismic ground shaking in the event of an earthquake along one of these faults. While the Proposed Project would be located in areas susceptible to earthquakes, implementation of the Proposed Project would not cause ground shaking or reasonably exacerbate the effects of ground shaking that may occur in the vicinity of the Project site. The Proposed Project, including the site's occupied structure (i.e., pre-engineered metal scale house building), would be designed in accordance with existing laws and regulations related to geological and seismic stability. Additionally, the Proposed Project would comply with the requirements and recommendations in the Geotechnical Conditions Report (Appendix E), as specified in SCA GEO-3.

The Proposed Project would neither cause nor exacerbate seismic ground shaking that may occur in the vicinity of the Project site. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

ii. Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, and collapse?

The 2002 EIR as Addended concluded that redevelopment could expose increased numbers of people and structures to seismic-related ground failure, including liquefaction, lateral spreading, subsidence, and collapse (Impact 4.13-2). As described above, the Project site is located within a seismically active region that may experience seismic related ground failure, including liquefaction and settlement.

The Project site is located within a liquefaction hazard zone (Appendix E). The artificial fill layer and naturally deposited loose sand near the top of the Merritt sand layer would likely liquefy during strong seismic ground shaking associated with a major earthquake (Appendix E). Liquefaction as a result of an earthquake may also induce lateral spreading and settlement. To reduce the potential for liquefaction-induced effects, all structures associated with the Proposed Project would be supported on steel pipe piles (encased in concrete pile caps) or in the case of the scale house and truck scales, would be supported by concrete foundations. Regardless, the Proposed Project would not exacerbate any existing liquefaction hazards in the vicinity of the Project Site and would not include uses that would substantially change the existing soil composition in the area nor increase the groundwater table or soil saturation.

The Project site is underlain by young Bay mud, which is a highly compressible soil layer that varies in thickness. Placement of the construction aggregate stockpiles and Project components, and operation of heavy construction equipment, would compress the soils resulting in

differential settlement of the young Bay mud deposits. The rate of settlement varies throughout the Project site depending on the thickness of the young Bay mud deposits. A majority of the Project site, including the portion underlying the area beneath the stockpiles, maintenance building, and truck scales consists of 20 feet of Bay Mud and 10 feet of hydraulically placed fill. According to the Geotechnical Conditions Report (Appendix E), this portion of the Project site would experience an estimated 28 inches of settlement within 18 months, 29 inches of settlement within 30 months, and 51 inches of settlement over the life of the lease period. The lower southwestern corner underlying the ship unloading hopper consists of 25 feet of Bay mud and 15 feet of hydraulically placed fill. According to the Geotechnical Conditions Report (Appendix E), this portion of the Project site would experience 27 inches of settlement within 18 months, 33 inches of settlement within 30 months, and 51 inches of settlement over the life of the lease period. The upper northwestern corner of the Project site underlying the transfer tower consists of 10 feet of Bay mud and 30 feet of hydraulically placed fill and would experience the least amount of settlement. According to the Geotechnical Conditions Report (Appendix E), this small area of the Project site would experience 9 inches of settlement within 18 months, 10 inches within 30 months, and 17 inches of settlement over the life of the lease period. To reduce the degree of settlement and associated impacts, all structures associated with the Project would be supported on steel pipe piles or by concrete foundations, as described above. In addition, the height of the stockpiles would be kept between 20 to 25 feet for the first few years of operation and increased slowly up to 40 feet in order to strengthen the bearing capacity of the young Bay mud layer and further reduce the degree of settlement. Because the Proposed Project would exacerbate settlement of the young Bay mud deposits underlying the Project Site, the Proposed Project would comply with the regulations of the 2019 CBC and the requirements of the Geotechnical Conditions Report (Appendix E), which is specified by SCA GEO-3. In addition, prior to construction, a preliminary soils report for the Project site would be prepared to further assess on-site geologic soil conditions in compliance with SCA GEO-2. At the end of the operational lease with the Port, all construction aggregate-related infrastructure would be removed from the Project site and areas of the Project site that had settled during the life of the Project would be filled with construction aggregates and recompacted to restore the pre-Project site grade.

The Proposed Project would neither cause nor exacerbate seismic-related ground failure in the vicinity of the Project site. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Impact GEO-2: Would the Proposed Project result in substantial soil erosion or loss of topsoil?

The 2002 EIR as Addended concluded that under certain conditions, disturbance of soils during construction could result in erosion (Impact 4.13-4). Construction activities associated with the Proposed Project would involve ground disturbance, which could expose soils to the potential of erosion. However, the Applicant would be required to prepare an erosion and sedimentation control plan that includes measures to prevent erosion during construction and limit grading to occur during the wet weather season (October 15 to April 15) unless authorized, as specified in SCA GEO-1. In addition, the Applicant would also be required to prepare a Small Project SWPPP that includes erosion control measures. The Small Project SWPPP would include the implementation of BMPs during construction to minimize erosion such as fiber rolls or other sediment controls, wind erosion controls, and stabilized

construction entrances/exits. Further, because the existing Project site is fully paved and soils underlying the site consist of artificial fill, the Proposed Project would not impact topsoil.

The Proposed Project would not result in substantial soil erosion or loss of topsoil on or in the vicinity of the Project site. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended**.** No mitigation measures are required.

Impact GEO-3: Would the Proposed Project be located on expansive soil, as defined in Table 18-1-B of the UBC (1994)[18], creating substantial risks to life or property?

The 2002 EIR as Addended concluded that redevelopment could occur on expansive soils (Impact 4.13-5). Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variations in soil moisture content from rainfall, landscape irrigation, and/or perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay. Based on the Natural Resources Conservation Service (NRCS) Web Soil Survey, the soil units underlying the Project site are mapped as urban land (NRCS 2020) and consist of highly variable fill ranging from lean clay to a mixture of silt, sand and gravel, underlain by young Bay mud deposits (Appendix E). As discussed in the 2002 EIR as Addended, due to the variability of soil fill materials, there is a potential for portions of the Project site to contain expansive soils. Although a Geotechnical Conditions Report (Appendix E) was prepared to assess the geologic conditions at the site in compliance with SCA GEO-3, prior to construction, a preliminary soils report for the Project site would be prepared to assess the potential for expansive soils, as specified by SCA GEO-2. Further, the Proposed Project would comply with the requirements and recommendations of the Geotechnical Conditions Report (Appendix E), as specified in SCA GEO-3. With preparation of a soils report and implementation of the recommendations in the geotechnical report, the Proposed Project would not be subject to excessive risks from expansive soils. Additionally, the Proposed Project would not exacerbate any existing hazards from expansive soils.

The Proposed Project would not be located on expansive soil and would not create substantial risks to life or property. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Table 3.5-2 summarizes the impacts from the 2002 EIR as Addended that apply to the Proposed Project; indicates SCA and/or mitigation measures that would apply to the Proposed Project; and indicates whether a new significant impact or a substantial increase in an identified impact would occur. No new significant impacts or substantial increase in the severity of an impact related to geology and soils not previously disclosed in the 2002 EIR as Addended would occur with implementation of the Proposed Project.

~~[18] The UBC was replaced in 2000 by the IBC. The state of California utilizes the California Building Code (2020) for all building standards.~~

Table 3.5-2. Impacts Related to Geology and Soils

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact GEO-1 (i): Would the Proposed Project directly or indirectly cause substantial risk of loss, injury or death involving: Strong seismic ground shaking?	SCA GEO-3	Proposed Project would not cause or exacerbate seismic ground shaking	Less than significant	No
Impact GEO-1 (ii): Would the Proposed Project directly or indirectly cause substantial risk of loss, injury or death involving: Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, and collapse?	SCA GEO-2 and SCA GEO-3	Proposed Project would not substantially exacerbate settlement	Less than significant	No
Impact GEO-2: Would the Proposed Project result in substantial soil erosion or loss of topsoil?	SCA GEO-1	Proposed Project would not substantially result in a loss of topsoil or erosion	Less than significant	No
Impact GEO-3: Would the Proposed Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (UBC) (1994)[19], creating substantial risks to life and property?	SCA GEO-2 and SCA GEO-3	Proposed Project would not be subject to excessive risks from expansive soils	Less than significant	No

~~[19] These SCA are applicable to the Proposed Project using the 2019 version of the California Building Code and the IBC to replace the UBC.~~

3.6 GREENHOUSE GAS EMISSIONS

This section identifies potential impacts of GHG emissions from the Proposed Project; evaluates whether the Proposed Project would result in new impacts from GHG emissions not identified in the 2002 EIR as Addended or would result in a substantial increase in the severity of the previously identified impacts due to Project changes, changes in setting, or new information. Previously identified SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

As noted in the 2012 Addendum, climate change and GHG emissions were not expressly addressed in the 2002 EIR and did not constitute legally "new information" as specifically defined under CEQA. Therefore, climate change and GHG emissions were not legally required to be analyzed as part of the 2012 Addendum. However, an analysis of climate change and GHG emissions using the recommended May 2011 BAAQMD CEQA Guidelines and Thresholds was conducted as part of the 2012 Addendum in order to provide more information to the public and decisionmakers. The analysis of potential impacts associated with GHG emissions from the Proposed Project is similarly presented here.

Construction and operation of the Proposed Project would result in the direct release of GHG emissions from the combustion of fossil fuels and indirect GHG emissions from generation of electricity that would be consumed by the Project.[20] This GHG analysis focuses on GHG emissions specific to the Proposed Project. Detailed emissions calculations and methodology are provided in Appendix C.

3.6.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

Updates to Federal, State, and local regulations since the 2012 Addendum, are summarized below.

FEDERAL

The USEPA has the authority to regulate CO_2 emissions under the Federal CAA. While there are no adopted federal mandates for the reduction of GHG emissions, the USEPA has implemented several actions.

- In August 2016, the USEPA and the NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program applies to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of sizes of buses and work trucks. The final standards are expected to lower CO_2e by approximately 1.1 billion metric tons (MT) and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program (USEPA and NHTSA 2016).

[20] Water use, water treatment, and solid waste disposal are expected to be minor contributors to GHG emissions relative to other sources from the Proposed Project and are not evaluated further.

- In August 2017, the USEPA asked for additional information and data relevant to assessing whether the GHG emissions standards for model years 2022-2025 remain appropriate. In early 2018, the USEPA Administrator announced that the midterm evaluation for the GHG emissions standards for cars and light-duty trucks for model years 2022-2025 was completed and stated his determination that the current standards should be revised in light of recent data. Subsequently, in April 2018, the USEPA and NHTSA proposed to amend certain existing Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks and establish new standards, covering model years 2022-2025. Compared to maintaining the post-2020 standards now in place, the pending proposal would increase U.S. fuel consumption (NHTSA 2018.). California and other states have announced their intent to challenge federal actions that would delay or eliminate GHG reductions.

- On September 27, 2019, the USEPA and NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One. The SAFE rule (Part One) went into effect in November 2019, and revoked California's authority to set its own GHGs standards and set Zero Emission Vehicle (ZEV) mandates in California. The SAFE rule freezes new ZEV sales at model year 2020 levels for year 2021 and beyond and will likely result in a lower number of future ZEVs and a corresponding greater number of future gasoline internal combustion engine vehicles (CARB 2019).

STATE

California's primary initiatives for combatting climate change and reducing GHG emissions are framed by AB 32, the California Global Warming Solutions Act of 2006. AB 32 and its associated Climate Change Scoping Plan outlined the State's approach to achieving a GHG emissions target of 1990 levels by 2020.

- In April 2015, Governor Brown signed Executive Order B-30-15, which established a goal to reduce GHG emissions to 40 percent below 1990 levels by 2030. This Executive Order also directed all State agencies with jurisdiction over GHG-emitting sources to implement measures designed to achieve the new interim 2030 goal, as well as the pre-existing long-term 2050 goal identified in Executive Order S-3-05. Additionally, the Executive Order directed CARB to update its scoping plan to address the 2030 goal.

- In 2016, Senate Bill (SB) 32 was approved. SB 32 codifies the 2030 emissions reduction goal of Executive Order B-30-15 to ensure progress towards California's goal of reducing GHG emissions to 80 percent below 1990 by 2050. SB 32 was coupled with a companion bill: AB 197 (Garcia 2016). Designed to improve the transparency of CARB's regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, with the responsibility to ascertain facts and make recommendations to the State Legislature concerning statewide programs, policies, and investments related to climate change. AB 197 also requires CARB to make certain GHG emissions inventory data publicly available on its website; consider the social costs of GHG emissions when adopting rules and regulations designed to achieve GHG emissions reductions; and include specified information in all scoping plan updates for the emissions reduction measures contained therein.

- The "Final 2017 Scoping Plan Update: Strategy for Achieving California's 2030 GHG Target," was released in November 2017. The Scoping Plan Update developed statewide inventory projection data for 2030, as well as identified reduction strategies capable of securing emissions reductions that allow for achievement of the Executive Order's new interim goal (CARB 2017). Emission reduction strategies in the 2017 Scoping Plan Update include continuation of the Cap-and-Trade Program through 2030, and incorporates a Mobile Source Strategy that includes strategies targeted to increase ZEV fleet penetration and a more stringent target for the Low Carbon Fuel Standard by 2030. The Second Update also incorporates approaches to cutting short-lived climate pollutants under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by CARB in March 2017), and acknowledges the need for reducing emissions in agriculture and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon.

- In September 2018, Governor Brown signed Executive Order B-55-18 (State of California, Executive Department 2018), which set a goal for statewide carbon neutrality, requiring the State of California to sequester as much carbon as it emits by 2045 and achieve and maintain negative GHG emissions thereafter. This goal is in addition to existing statewide GHG reduction targets. This Executive Order also directed CARB to work with relevant State agencies to develop an implementation and accounting framework to measure progress towards this goal, and also directs CARB to update its Scoping Plan.

- On June 25, 2020, CARB adopted the Advanced Clean Truck Regulation which calls for acceleration of a large-scale transition of ZE medium-and heavy-duty vehicles from Class 2b trucks to Class 8 trucks. Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines will be required to sell ZE trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, ZE truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales. CARB is currently considering two companion regulations: one focused on lowering NOx emission limits and a requirement for larger fleets in the state to transition to electric trucks year over year.

- On August 7, 2012, CARB adopted a set of regulations to control emissions from passenger vehicles, collectively called Advanced Clean Cars. This program was developed in coordination with USEPA and NHTSA in order to control the emission of smog-causing criteria pollutants and GHG emissions (CARB 2020b). In California, the standards are promulgated as a single coordinated package of regulations that govern standards for criteria pollutant and GHG emissions and establish a technology mandate for ZEVs. The criteria pollutant and GHG emissions standards are consistent with the current USEPA and NHTSA standards described above and are in effect an extension of the Pavley regulations beyond 2016. The ZEV regulation is designed to achieve the State's long-term emission reduction goals by requiring auto manufacturers to offer specific numbers of these cars available for sale.

- In 2007, Governor Schwarzenegger issued Executive Order S-1-07 to enact the low-carbon fuel standard (LCFS). The LCFS calls for a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. It also directed CARB to determine whether this LCFS could be adopted as a discrete early-action measure under AB 32. CARB adopted the Low Carbon Fuel Standard on April 23, 2009 and amended it on January 4, 2019, in order to support the 2030 GHG emissions targets enacted through SB 32 (as discussed further above). The amended standard requires a 20 percent reduction in the carbon intensity of California's transportation fuels by 2030.

LOCAL

BAAQMD has primary responsibility for air quality planning and regulation in the San Francisco Bay Area Air Basin, which includes Alameda County. BAAQMD has responsibility for regulating and permitting stationary sources and assuring that State and Federal controls on mobile sources are effectively implemented via administration of grant funding for mobile sources, among other duties. As discussed above, Association of Bay Area Governments (ABAG) is tasked with developing the local Sustainable Communities Strategy (SCS). The City has also prepared climate-related targets.

- BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the San Francisco Bay Area Air Basin (BAAQMD 2020b). The climate protection program includes measures that promote energy efficiency, reduce vehicle miles traveled (VMT), and develop alternative sources of energy, all of which assist in reducing emissions of GHGs and in reducing air pollutants that affect the health of residents. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

- In April 2017, BAAQMD adopted the 2017 CAP, which includes GHG reduction measures (BAAQMD 2017b). The 2017 CAP acknowledges State goals for 2030 and discusses focus areas for GHG reductions, such as waste reduction and food choices. Consistent with the GHG reduction targets adopted by the State of California, the 2017 CAP lays the groundwork for BAAQMD's long-term efforts to reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

- In May 2017, BAAQMD published CEQA Air Quality Guidelines, which includes thresholds, rules, plans, and methodologies for evaluating GHG emissions. The BAAQMD thresholds were developed for the Bay Area after considering the effects of AB 32 scoping plan measures that would reduce regional emissions. BAAQMD intends to achieve GHG reductions from new land use developments to close the gap between projected regional emissions with AB 32 scoping plan measures and the AB 32 targets. The BAAQMD GHG recommendations currently include the same thresholds that were published in the prior BAAQMD guidelines in 2011 and 2012, as described further below. BAAQMD is in the process of updating these thresholds to reflect longer-term GHG targets.

- As of March 2017, Chapter 15.04, Part 11 of the City's Municipal Code requires all new multi-family and non-residential buildings to include full circuit infrastructure for plug-in electric vehicle (PEV) charging stations for at least 10 percent of the total parking spaces. In addition, inaccessible conduits for future expansion of PEV spaces must be installed for 90 percent of the total parking at multi-family buildings and 10 percent of the total parking at non-residential buildings. The new requirements are designed to accelerate the installation of vehicle chargers to address demand.

- On July 28, 2020, the City voted to adopt the *Oakland 2030 Equitable Climate Action Plan* (ECAP), a new "10-year plan for mitigating and adapting to the climate crisis through actions rooted in equity" (City of Oakland 2020). The ECAP "includes 40 actions across seven sectors (Transportation + Land Use, Buildings, Material Waste + Consumption, Adaptation, Carbon Removal, City Leadership, and the Port) that are equitable, ambitious, realistic, and flexible to accommodate technological and other advancements over time." Additionally, it contains an interim GHG reduction goal of 56 percent below 2005 levels by 2030. The City has conducted an in-depth GHG analysis using the Climate Action for Urban Sustainability planning tool to help identify critical actions needed for the City to achieve their long-term GHG reduction goals for 2030 and 2050 (Bloomberg 2018). These actions have been outlined and prioritized in the final draft ECAP (City of Oakland 2020). As noted in the ECAP, the Port (seaport and airport) accounts for 2.4 percent of local GHG emissions and the Port has reduced GHG emissions 16.6 percent since 2005. The ECAP further notes that emission reduction strategies and programs related to Port operations and management are not included in the ECAP because the Port operates under an independent Board of Commissioners. The Port, as part of its own plans and programs, can implement strategies that will further the City's efforts to achieve the low-carbon future described in the ECAP.

- As described in Section 3.~~3~~4, "Air Quality," the Port's 2020 and Beyond Plan is the Port's master plan for achieving its vision of a ZE Seaport. With regard to GHG emissions, the Plan includes a goal to "reduce greenhouse gas emissions". The Plan identifies a number of Implementing Actions including suggested actions that are currently going through the screening process described in the Plan, and programmed actions for which funding has been allocated. As suggested actions proceed through the screening process, some of them will become programmed actions. Potential programmed actions, such as development of electrical charging capacity and other low carbon intensity energy infrastructure, would result in reductions in GHG emissions.

UPDATES TO ENVIRONMENTAL SETTING

ENVIRONMENTAL SETTING

The 2012 Addendum includes a discussion of global climate change and its sources. GHG emissions inventories for the City, State of California, United States, and world have changed in the interim years, but this does not represent a substantial update to the environmental setting.

THRESHOLDS OF SIGNIFICANCE

While GHG emissions and global climate change impacts were discussed in the 1999 BAAQMD CEQA Guidelines, no thresholds of significance were established. BAAQMD adopted and incorporated GHG thresholds of significance into their 2011 and 2017 CEQA Guidelines (BAAQMD 2017a) as shown in Table

3.4-4 to assist lead agencies in evaluating and mitigating air quality impacts under CEQA (see Section 3.4, "Air Quality"). BAAQMD's thresholds were developed to evaluate whether land-use projects would comply with AB 32's statewide GHG reduction goal for 2020, which is to reduce GHG emissions to 1990 levels. The scientific soundness of the thresholds is supported by substantial evidence presented in BAAQMD's Revised Draft Options and Justification Report (BAAQMD 2009). BAAQMD is in the process of updating their CEQA Guidelines to include revised significance thresholds to evaluate long-term GHG reduction goals beyond 2020.

In addition, CEQA Guidelines Section 15064.4(b) requires that a lead agency consider, when determining the significance of impacts from GHG emissions on the environment, "the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting."

3.6.2 Summary of Prior Analysis

As noted above, although not required for purposes of evaluating a potentially significant impact, an analysis of GHG emissions was presented in the 2012 Addendum to the 2002 EIR within the context of the May 2011 BAAQMD CEQA Guidelines and Thresholds to provide more information to the public and decisionmakers. Thus, although the analysis in this SEIR evaluates climate change and GHG emissions, there is no resulting impact determination.

The Proposed Project differs from the OAB Area Redevelopment Plan by changing a portion of a terminal designated for container cargo to bulk construction aggregates. The different structures associated with the change in use would result in new construction and operational activities that would have the potential to increase GHG emissions. Potential impacts associated with the Proposed Project are discussed in more detail below.

3.6.3 Impacts

Approach to Analysis

GHG emissions associated with construction and operation of the Proposed Project were calculated using generally accepted methods. GHGs from on-road vehicles, off-road equipment, and OGVs and tugs, and electricity use were calculated as described in Appendix C and compared for informational purposes only to BAAQMD's 2011/2017 significance criteria. Because this comparison is provided for informational purposes only; there is no resulting significant impact.

Impacts

Impact GHG-1: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, specifically:

i. **For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO_2 annually?**

ii. **For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO_2e annually OR more than 4.6 metric tons of CO_2e per service population annually?**

As described in Appendix C, GHG emissions from construction of the Proposed Project would be 1,069 MT CO_2e. Following City guidelines for the quantification of GHG emissions, the Project's GHG emissions when annualized over a 12-year initial lease period would be 89.1 metric tons per year (mtpy) of CO_2e. As noted in Chapter 2, *Project Description, th*e 12-year period corresponds to the minimum length of the lease between ERA and the Port.

Operational GHG emissions include emissions from generation of electricity consumed on-site and GHG emissions from combustion of fossil fuels by mobile sources associated with Project operations (OGVs, tugs, front-end loaders, haul trucks, and employee commute vehicles). As shown in **Table 3.6-1a**, emissions from operation of the unmitigated Proposed Project would be 9,711 mtpy CO_2e: 271 from electricity consumption and 9,440 from mobile sources. Total operation and amortized construction emissions are 9,800 mtpy CO_2e. Implementation of Mitigation Measure ERA AQ-1 would reduce operational GHG emissions through the use of a battery electric sweeper in place of a conventional diesel sweeper as described in Section 3.~~3~~4, "Air Quality." Grid power, which would be used to charge the electric sweeper, has a lower carbon intensity than diesel fuel used by conventional sweepers, and therefore would result in lower GHG emissions.

Table 3.6-1a. Maximum Annual Project GHG Emissions – Unmitigated

	CO_2 (tpy)	**CH_4 (tpy)**	**N_2O (tpy)**	**CO_2e (mtpy)**
Construction (amortized)	97.60	0.02	<0.01	89.1
OGVs – hoteling	1,509	0.02	0.07	1,389
OGVs – transit/maneuvering	976	0.02	0.05	899
Tugs	760	0.08	0.03	699
Trucks – on-site	1,085	0.02	0.17	1,031
Trucks – off-site	2,917	<0.01	0.46	2,771
Off-Road Equipment	2,870	0.16	0.07	2,627
Employee Commute	27	<0.01	<0.01	25
Subtotal: operations mobile sources	*10,145*	*0.34*	*0.85*	*9,440*
Electricity Usage	296	0.05	0.01	271
Subtotal: Operations	10,441	0.34	0.86	9,711
Total:	*10,538*	*0.37*	*0.86*	*9,800*

BAAQMD 1999 Significance Thresholds: N/A. Does Proposed Project exceed BAAQMD 1999 Thresholds? N/A.

BAAQMD 2011/2017 Significance Thresholds: Stationary Source: 10,000 mtpy; Other Sources: Compliance with Qualified GHG Reduction Strategy OR 1,100 mtpy OR 4.6 mtpy per service population (residents+employees). Provided for informational purposes only; not used for determining significance.

Does Proposed Project exceed BAAQMD 2011/2017 Thresholds? Does not exceed Stationary Source. Does exceed Other Sources.

CO_2 = carbon dioxide, CH_4 = methane, N_20 = dinitrogen monoxide, CO_2e = carbon dioxide equivalent.

SCA GCC-1: *Greenhouse Gas Reduction Plan* was included in the 2002 EIR as Addended but would not apply to the Proposed Project; the Port's completion of the 2020 and Beyond Plan, as the Seaport's GHG reduction plan, satisfies the intent of this SCA. SCA AIR-2 and Mitigation Measure ERA AQ-1 would also contribute to a reduction of GHG emissions.

GHG emissions with Mitigation Measure ERA AQ-1 applied are shown in **Table 3.6-1b**. Total GHG emissions are reduced from 9,800 mtpy to 9,651 mtpy. While this is below the BAAQMD threshold for stationary sources, mitigated GHG emissions remain above the 1,100 mtpy threshold for other sources.

Table 3.6-1b. Maximum Annual Project GHG Emissions – Mitigated

	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)	CO_2e (mtpy)
Construction (amortized)	97.60	0.02	<0.01	89.1
OGVs – hoteling	1,509	0.02	0.07	1,389
OGVs – transit/ maneuvering	976	0.02	0.05	899
Tugs	760	0.08	0.03	699
Trucks – on-site	1,085	0.02	0.17	1,031
Trucks – off-site	2,917	<0.01	0.46	2,771
Off-Road Equipment	2,705	0.15	0.07	2,476
Employee Commute	27	<0.01	<0.01	25
Subtotal: operations mobile sources	*9,953*	*0.29*	*0.84*	*9,264*
Electricity Usage	298	0.05	0.01	273
Subtotal: Operations	10,278	0.34	0.85	9,562
Total:	*10,376*	*0.36*	*0.85*	*9,651*

BAAQMD 1999 Significance Thresholds: N/A. Does Proposed Project exceed BAAQMD 1999 Thresholds? N/A.

BAAQMD 2011/2017 Significance Thresholds: Stationary Source: 10,000 mtpy; Other Sources: Compliance with Qualified GHG Reduction Strategy OR 1,100 mtpy OR 4.6 mtpy per service population (residents+employees). Provided for informational purposes only; not used for determining significance.

Does Proposed Project exceed BAAQMD 2011/2017 Thresholds? Does not exceed Stationary Source. Does exceed Other Sources.

CO_2 = carbon dioxide, CH_4 = methane, N_20 = dinitrogen monoxide, CO_2e = carbon dioxide equivalent.

As noted above, GHG emissions from construction and operation of the OAB Area Redevelopment Plan were disclosed in the 2002 EIR as Addended. The OAB Area Redevelopment Plan, per the 2002 EIR, would result in total CO_2e emissions of 171,292 mtpy, which would exceed the BAAQMD's 2011 recommended GHG emissions threshold of 10,000 mtpy for stationary sources and 1,100 for other sources. As noted above, this analysis was provided for informational purposes only; the 1999 BAAQMD Thresholds that are the applicable thresholds for the 2002 EIR as Addended do not contain GHG thresholds; therefore, this impact was not considered significant in the 2002 EIR as Addended. As discussed in Section 3.4.3, GHG emissions from the Project are comparable to the GHG emissions which would be expected if the Project site were used as a container terminal as assumed in the 2002 EIR as Addended. Thus, the Proposed Project would not substantially increase GHG emissions beyond what was previously disclosed.

Impact GHG-2: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions?

The construction and operation of the Proposed Project would result in GHG emissions, but these would not impede the implementation of statewide GHG goals and policies specifically outlined in AB and SB 32, which codify the goals of Executive Orders S-3-05 and B-30-15. As shown in Tables 3.6-1a and 3.61b,

GHG emissions from the Proposed Project would be less than the BAAQMD 2011/2017 significance threshold for a stationary source. GHG emissions from construction equipment use are one-time emissions and would cease once construction of the Project is complete. As such, the Proposed Project would not conflict with the State goal of reducing GHG emissions and would not conflict with the updated (2017) AB 32 Scoping Plan. Transportation sector regulations and future measures designed to achieve the emission reductions assumed as part of the Scoping Plan as described above, including items such as truck efficiency, low carbon fuel standard, proper tire inflation, truck stop electrification and strengthening light duty vehicle standards, are applicable to the Proposed Project and would result in a reduction of operational GHG emissions associated with the Proposed Project. Any future regulations that may impact operational emissions that may be implemented as part of the statewide goals of SB 32 must be complied with by the Project if applicable.

The Port continues to plan for reducing the GHG emissions of seaport activities. The Board of Port Commissioners has approved GHG emission reduction goals and programs, to be pursued independently of the City's ECAP, via the 2020 and Beyond Plan. The Proposed Project would participate in applicable GHG reduction strategies implemented under the 2020 and Beyond Plan.

Thus, the Proposed Project would not conflict with any applicable plan, policy, or regulation for the purpose of reducing GHG emissions. As noted above, this analysis is provided for informational purposes only; the 1999 BAAQMD CEQA Guidelines are the applicable guidelines for this Project and they do not contain a GHG plan consistency requirement.

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3.7 HAZARDS AND HAZARDOUS MATERIALS

This section identifies potential hazardous and hazardous materials impacts of the Proposed Project; evaluates whether the Proposed Project would result in new significant impacts related to hazards and hazardous materials not identified in the 2002 EIR as Addended for the OAB Area Redevelopment Plan; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to Project changes, changes in setting, or new information. Previously identified mitigation measures and SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

3.7.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

No updated regulations relevant to hazards and hazardous materials have occurred since the 2012 Addendum.

UPDATED ENVIRONMENTAL SETTING

The Project site is located within the Port's OHT in a highly industrial area. Past industrial, maritime, and surrounding OAB uses involved the routine transport and use of hazardous materials by ship, truck, and rail; spills of these materials, including fuels, metals, and other chemicals, may have occurred during past industrial activities. Industrial uses generate hazardous waste, such as oil, automotive fluids, and other operational-related chemicals and wastes.

Historical uses within the Project area included municipal garbage storage (1916-1926), the former Union Construction Company facilities (1918-1933), and several former Army uses including a transit shed (1941-1953), vehicle storage area (1941-1959), as well as housing just south of the Proposed Project (1941-1960s) (Baseline Environmental Consulting [Baseline] 2008). Although, several underground storage tanks (USTs) associated with past uses were previously removed from six locations within the Port's former OHT area, several historical USTs may still be in place or the locations may be unknown (Baseline 2008). One historical 10,000-UST was removed at a location located in the southwest area of the Project site. One estimated area for a UST that still may be in place is in the southeast corner of the Project site; another area for potential historical USTs still in place is along the southern and east side of the Project site that was previously within the Army housing area; and other unknown USTs may also be present (Baseline 2008).

The Project Site is entirely paved; however, fill underlying the Project site was dredged from the Bay or from unknown sources. There is potential that some of the fill may contain municipal garbage and contaminated materials. One estimated area of underlying municipal garbage was identified to be located on the southwest area of the Project Site (Baseline 2008). The Project site is currently used for parking and shipping container/chassis storage/staging to support Port maritime activities. No other structures or equipment from historic industrial uses or aboveground storage tanks (ASTs) are located on the Project site.

Groundwater at the Project site is estimated to be encountered at depths of 5 to 7 feet below ground surface based on existing boring logs, proximity to the Bay and mapped historic groundwater in the

area; however, groundwater is likely to fluctuate several feet daily with the tide, and may also change due to variations in rainfall and irrigation practice (ENGEO 2018). Groundwater within Project site and surrounding area has been impacted by known past industrial releases of hazardous materials. Past groundwater monitoring by the Port found that groundwater was contaminated by diesel and gasoline among other chemicals; however, groundwater contamination is localized to those areas surrounding known leaking underground storage tank (LUST) sites (Baseline 2008).

The closest identified hazardous sites are located approximately 500 feet south of the Project site along Maritime Street and include two LUST clean-up sites. Groundwater at these two sites was contaminated with diesel and gasoline by the LUSTs; however, clean-up activities at these two sites has been completed and the cases have been closed since 1995 and 1996 (SWRCB 2020). Database searches have identified no hazardous sites within the Project site (SWRCB 2020 and Department of Toxic Substances Control [DTSC] 2020).

3.7.2 Summary of Prior Analysis

Impacts and mitigation measures in the 2002 EIR as Addended were reviewed for potential applicability to the Proposed Project. Impacts and the associated mitigation measures that may apply to the Proposed Project are summarized below.

The 2002 EIR as Addended concluded that potentially significant impacts related to contaminated soil and groundwater and hazardous materials in and around ASTs and USTs, from the OAB Area Redevelopment Plan would be reduced to less-than-significant levels:

- **Impact 4.7-4:** Site preparation, remediation and development of areas that contain contaminated soil and groundwater could expose remediation and construction workers, and future utility workers, tenants, and visitors to soil and groundwater contamination conditions.

- **Impact 4.7-5:** Potential exposure to contaminants in soil and groundwater remaining in place after remediation could be a hazard to future residents, employees and visitors.

- **Impact 4.7-7:** Workers or others could be exposed to hazardous materials and contamination in and around ASTs and USTs during remediation and redevelopment activities.

For the potentially significant impact related to contaminated soil and groundwater (Impact 4.7-4 and Impact 4.7-5) and USTs (Impact 4.7-7), the 2002 EIR as Addended identified the following mitigation measures and SCA to reduce impacts from the OAB Area Redevelopment Plan to a less-than-significant level:

- **Mitigation Measure 4.7-4:** For the project areas not covered by the DTSC-approved Remedial Acton Plan/Risk Management Plan (RAP/RMP), investigate potentially contaminated sites; if contamination is found, assess potential risks to human health and the environment, prepare and implement a clean-up plan for DTSC or RWQCB approval, prepare and implement a Risk Management Plan, and prepare and implement a Site Health and Safety Plan prior to commencing work.

- **Mitigation Measure 4.7-5:** For the project areas not covered by the DTSC-approved RAP/RMP, remediate soil and groundwater contamination consistent with the City Urban Land Redevelopment Program and other applicable laws and regulations.

- **Mitigation Measure 4.7-10:** For the remainder of the redevelopment project area (non-OAB areas), if an AST or UST is encountered, it would be closed in place or removed and the soil would be tested and remediated, if necessary, pursuant to regulatory approvals and oversight.

- **SCA HAZ-1: Best Management Practices for Soil and Groundwater Hazards:**

  Ongoing throughout demolition, grading, and construction activities:

  The project applicant shall implement all of the following BMPs regarding potential soil and groundwater hazards.

  a) Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner or if designated for off-site disposal at a permitted facility, the soil shall be loaded, transported and disposed of in a safe and secure manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state and federal agencies laws, in particular, the RWQCB and/or the Alameda County Department of Environmental Health (ACDEH) and policies of the City. The excavation, on-site management, and off-site disposal of soil from Project areas within the OAB shall follow the DTSC-approved RAP/RMP.

  b) Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies of the City, RWQCB and/or ACDEH. The on-site management and off-site disposal of groundwater extracted from Project areas within the OAB shall follow the DTSC-approved RAP/RMP for Project areas within the OAB. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building (pursuant to the SCA regarding Radon or Vapor Intrusion from Soil and Groundwater Sources.

  c) Prior to issuance of any demolition, grading, or building permit, the applicant shall submit for review and approval by the City, written verification that the appropriate federal, state or county oversight authorities, including but not limited to RWQCB and/or ACDEH, have granted all required clearances and confirmed that the ~~all~~ applicable standards, regulations and conditions for all previous contamination have been applied at the site. The applicant also shall provide evidence from the City's Fire Department, Office of Emergency Services, indicating compliance with the SCA requiring a Site Review by the Fire Services Division pursuant to City Ordinance No. 12323, and compliance with the SCA requiring a Phase I and/or Phase II Reports.

  (*Note: The Proposed Project site would not be located within the former OAB; therefore, the DTSC-approved RAP/RMP would not apply.*)

- **SCA HAZ-2: Hazards Best Management Practices:**

  Prior to commencement of demolition, grading, or construction:

  The project applicant and construction contractor shall ensure BMPs are implemented as part of construction to minimize the potential negative effects to groundwater and soils. These shall include the following:

  a) Follow manufacture's recommendations on use, storage, and disposal of chemical products used in construction;

  b) Avoid overtopping construction equipment fuel gas tanks;

  c) During routine maintenance of construction equipment, properly contain and remove grease and oils;

  d) Properly dispose of discarded containers of fuels and other chemicals.

  e) Ensure that construction would not have a significant impact on the environment or pose a substantial health risk to construction workers and the occupants of the proposed development. Soil sampling and chemical analyses of samples shall be performed to determine the extent of potential contamination beneath all USTs, elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition, or construction activities would potentially affect a particular development or building.

  f) If soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any USTs, abandoned drums or other hazardous materials or wastes are encountered), the applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies) and implementation of the actions described in the City's SCA (and DTSC-approved RAP/RMP for Project area within the OAB), as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

  (*Note: The Proposed Project site would not be located within the former OAB; therefore, the DTSC-approved RAP/RMP would not apply*.)

- ~~**SCA HAZ-3: Hazardous Materials Business Plan:**~~

  ~~*Prior to issuance of a business license:*~~

  ~~The project applicant shall submit a Hazardous Materials Business Plan (HMBP) for review and approval by Fire Prevention Bureau, Hazardous Materials Unit. Once approved this plan shall be kept on file with the City and will be updated as applicable. The purpose of the HMBP is to ensure that employees are adequately trained to handle the materials and provides information~~

~~to the Fire Services Division should emergency response be required. The HMBP shall include the following:~~

~~a) The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids.~~

~~b) The location of such hazardous materials.~~

~~c) An emergency response plan including employee training information.~~

~~d) A plan that describes the manner in which these materials are handled, transported and disposed.~~

~~*(Note: The California Environmental Protection Agency (CalEPA) has designated the ACDEH as the Certified Unified Program Agency (CUPA) for the City. All CUPA Programs within the City that were previously under the jurisdiction of the City have been transferred to ACDEH including the HMBP Program.)*~~

- **SCA HAZ-7: Other Materials Classified as Hazardous Waste**

  Prior to issuance of any demolition, grading or building permit:

  If other materials classified as hazardous waste by State or federal law are present, the project applicant shall submit written confirmation to Fire Prevention Bureau, Hazardous Materials Unit that all State and federal laws and regulations shall be followed when profiling, handling, treating, transporting and/or disposing of such materials.

  (Note: CalEPA has designated the ACDEH as the CUPA for the City. All CUPA Programs within the City that were previously under the jurisdiction of the City have been transferred to ACDEH including hazardous materials management.)

The 2002 EIR as Addended concluded that the from the OAB Area Redevelopment Plan would have a less-than-significant impact on routine use or accidental release of hazardous materials, and routine generation and management of hazardous waste (Impact 4.7-1 and Impact 4.7-3):

- **Impact 4.7-1:** Routine use or accidental release of hazardous materials during remediation, construction, and operations could expose people or the environment to these materials.

- **Impact 4.7-3:** Routine generation and management of hazardous waste or accidental release of hazardous waste during remediation, construction and operation could expose people and the environment to these wastes.

The Proposed Project differs from the OAB Area Redevelopment Plan by changing a portion of a terminal designated for container cargo to bulk construction aggregates. The change in use would have the potential to expose the public and the environment to hazardous materials and waste. Additionally, construction activities would also have the potential to encounter contaminated materials, including soil and groundwater, and historical USTs. Potential impacts associated with the Proposed Project area discussed in more detail below.

3.7.3 Impacts and Mitigation Measures

The Proposed Project was evaluated against applicable significance criteria from the 2002 EIR as Addended. The Proposed Project would have a significant impact on the environment if it would:

- Create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a substantial hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; or
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, or be another known or suspected contaminated site that would (1) create a significant hazard to the public or the environment, (2) exceed the acceptable excess cancer risk range of 1×10^{-5} for commercial or industrial land uses as set forth in the *Oakland Urban Land Redevelopment Program: Guidance Document* (City of Oakland 2000), or (3) exceed the acceptable excess cancer risk range set in the National Contingency Plan (1×10^{-6} to 1×10^{-4}) for other uses.

IMPACTS

Impact HAZ-1: Would the Proposed Project create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The 2002 EIR as Addended concluded that routine use, routine generation, and management of hazardous waste during remediation, construction, and operations could expose people or the environment to these materials and wastes (Impacts 4.7-1 and 4.7-3).

PROJECT CONSTRUCTION

Construction activities would involve limited transport, use, and disposal of hazardous materials, such as diesel fuel, gasoline, oil and grease, hydraulic fluid, paint, and solvents. These materials would primarily be contained within construction equipment but may also be transported to the site and disposed of periodically. Equipment vehicle fueling during construction would be conducted on-site by the use of a tanker truck equipped with fuel dispensers. Routine transport, use, and disposal of hazardous materials during Project construction could expose the general public, construction workers, or the environment to hazardous materials. Such effects could include illness from exposure to toxic substances or soil or groundwater contamination from inappropriate disposal practices.

The storage, handling, and disposal of hazardous materials are regulated by the DTSC, USEPA, Occupational Safety and Health Administration (OSHA), California Occupational Safety and Health Administration (Cal/OSHA), and ACDEH (ACDEH 2020). Thus, the Proposed Project would be subject to existing federal, state, and local laws and regulations related to hazardous materials identified in the 2002 EIR as Addended. Additionally, preparation of a Small Project SWPPP would be required as part of the submittals for the Port Development Permit application. As described in Section 3.~~7~~8, "Hydrology and Water Quality," the SWPPP would include implementation of good housekeeping measures for proper storage and disposal of hazardous materials. Additionally, adherence to SCA HAZ-1 and SCA HAZ-2 which require the implementation of BMPs during construction to ensure the proper handling,

storage, and disposal of hazardous materials and waste, would further reduce potential impacts related to hazardous materials during construction.

PROJECT OPERATIONS

Operation of the Proposed Project would also require the handling, use, storage, and disposal of hazardous materials for equipment maintenance and site operations. Although no fuel storage tanks would be located on-site, fuel would be stored in off-road equipment and trucks. Similar to fueling during construction, off-road equipment would be fueled on-site by mobile fuel trucks. All minor maintenance of off-road equipment would be performed within the maintenance yard and major maintenance and repairs would be conducted off site. Fueling and maintenance of haul trucks that would be loaded with aggregate material would occur off-site. On-site maintenance, repairs, and fueling associated with operation of the Proposed Project would not generate large or frequent quantities of hazardous waste; however, these activities could generate limited amounts of used oil, absorbent materials, and potentially contaminated soil or materials from leaking equipment. All operational activities involving hazardous materials and waste would be conducted in compliance with federal, state, and local laws and regulations, as specified in SCA HAZ-7. ~~Additionally, the Applicant would be required to prepare a HMBP, as described under SCA HAZ-3, to ensure that all employees on-site are adequately trained to handle and dispose of hazardous materials.~~

The on-site stockpiles of ERA construction aggregates would contain less than 5 percent quartzite, which is a mineral consisting predominately of crystalline silica (see Safety Data Sheet in Appendix B). The handling and storage of ERA construction aggregates could expose employees, workers, and residents to respirable crystalline silica, which can cause severe health effects. The health effects to off-site workers and residents from respirable crystalline silica as well as TACs from operational equipment is addressed in Section 3.~~3~~4, "Air Quality." The Proposed Project would comply with the standards to control employee exposures to respirable crystalline silica, including OSHA's Respirable Crystalline Silica Standard for general industry and maritime uses. In compliance with OSHA standards, respirable concentrations of crystalline silica would be required to remain below the 25 µg/m3 action level by maintaining the stockpiles with a moisture content of one (1) to eight (8) percent depending on the type of construction aggregate in compliance with industry standards to control dust. The Applicant would also be required to frequently monitor and measure ambient concentrations of respirable crystalline silica on-site. In the event of an exceedance, the Applicant would perform necessary measures to reduce ambient concentrations or provide exposure controls to on-site employees in accordance with Title 8 CCR section 1532.3.

The Proposed Project would not create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Impact HAZ-2: Would the Proposed Project create a substantial hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The 2002 EIR as Addended concluded that the accidental release of hazardous materials and waste during remediation, construction, and operations could expose people or the environment to these materials and wastes (Impact 4.7-1 and 4.7-3).

PROJECT CONSTRUCTION

As described above, construction activities associated with the Proposed Project would involve the use, transport, storage, and disposal of hazardous materials, including, but not limited to, diesel fuel, gasoline, and solvents. These materials would primarily be contained within construction equipment but may also be transported to and from the site. Use of these materials could potentially result in accidental spills that could release hazardous materials into the environment. Such potential releases could harm plants, soil-dwelling microorganisms, contaminate groundwater as well as affect the general public, construction workers, and the environment.

As discussed above and in more detail in Section 3.~~7~~8, "Hydrology and Water Quality," the Proposed Project would be required to prepare a Small Project SWPPP as part of the submittals for the Port's Development Permit application. The SWPPP would include good housekeeping measures for proper storage and management of hazardous materials, as well as spill prevention, control, and counter-measures. Spill kits would be maintained on-site to contain and clean up any minor leaks or spills during fueling and other construction activities. Additionally, all construction equipment would be maintained in proper working condition to minimize potential fluid leaks. Any necessary equipment repairs during construction would be performed off-site. Additionally, adherence to SCA HAZ-1 and SCA HAZ-2 which require the implementation of BMPs during construction would further reduce potential impacts related to accidental release of hazardous materials into the environment.

PROJECT OPERATIONS

Operation of the Proposed Project would involve the use, transport, and disposal of hazardous materials (e.g., fuel and similar substances) that could potentially create a significant hazard for workers, the public or the environment if they were to spill or otherwise be accidentally released. As described above, no fuel storage tanks would be located on-site; however, there is a potential for hazardous materials to be spilled or released during on-site fueling and maintenance activities. ~~The Applicant would be required to prepare and implement a HMBP as specified in SCA HAZ-3, which would include emergency and spill contingency-related requirements, further reducing potential impacts from a release or spill of hazardous materials during Project operation. Additionally, s~~Spill kits would be maintained throughout the Project site in accordance with the IGP. Further, all off-road equipment would be maintained regularly to reduce the possibility of leaks and releases. On-site employees would be trained to contain and remove any unintentional leaks and releases according to federal, state, and local regulations.

The Proposed Project would not create a substantial hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are necessary.

Impact HAZ-3: Would the Proposed Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, or be another known or suspected contaminated site that would (1) create a significant hazard to the public or the environment, (2) exceed the acceptable excess cancer risk range of 1×10^{-5} for commercial or industrial land uses as set forth in the *Oakland Urban Land Redevelopment Program: Guidance Document* (City of Oakland 2000), or (3) exceed the acceptable excess cancer risk range set in the National Contingency Plan (1×10^{-6} to 1×10^{-4}) for other uses?

The 2002 EIR as Addended concluded that the site preparation, remediation, and redevelopment could expose workers or others to contaminated soil and groundwater and hazardous materials in and around ASTs and USTs (Impacts 4.7-4, 4.7-5, and 4.7-7).

The Project site is not located on a hazardous materials site compiled pursuant to Government Code Section 65962.5 (SWRCB 2020 and DTSC 2020). However, due to past industrial uses and the potential presence of municipal garbage in fill underlying the Project site, there is a potential for contaminated soil and groundwater to be present. Additionally, former USTs associated with past industrial and OAB uses may also present within the Project site. USTs in the surrounding area have released fuels and other chemical contaminants in soils and groundwater. Thus, ground disturbing activities associated construction could potentially encounter contaminated soil, groundwater, or disturb or damage an unknown UST and release these hazardous materials and waste into the environment, which would cause a significant impact. In the event that contaminated soil or groundwater are encountered during construction, construction would be halted to assess the potential contamination. Implementation of Mitigation Measures 4.7-4 and 4.7-5 would ensure that appropriate measures are undertaken consistent with applicable laws and regulations related to soil and groundwater contamination. If a UST is discovered during construction, it would be closed in place or removed according to federal, state, and local guidelines. Any hazardous materials in the tank would be properly removed and disposed, the tank would be removed, the soil under the tank would be tested for contamination, and the tank would be recycled. Implementation of Mitigation 4.7-10 would ensure that appropriate safety precautions and work practices are implemented related to USTs. Additionally, adherence to SCA HAZ-1, SCA HAZ-2, and SCA HAZ-7 require implementation of BMPs during construction to ensure that potentially contaminated materials, including soil and groundwater, and other hazardous materials classified as hazardous waste are properly handled and disposed. Thus, implementation of these SCA and the mitigation measures mentioned above would reduce potential impacts related to the discovery of contaminated materials/waste creating a hazard to the public or the environment.

Refer to Section 3.~~3~~4, "Air Quality" for a discussion on the Proposed Project impacts related to cancer risk and other health impacts associated with construction and operational activities.

The Project site is not located on a hazardous materials site; however, there is still a potential for contaminated soil and groundwater, and former USTs to be present within the Project site. Mitigation Measures 4.7-5, 4.7-5, and 4.7-10, and SCA HAZ-1, SCA HAZ-2, and SCA HAZ-7 would be applied to the Proposed Project. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended, which were **less than significant with mitigation**.

Table 3.7-1 summarizes those impacts from the 2002 EIR as Addended that apply to the Proposed Project; indicates SCA and/or mitigation measures that would apply to the Proposed Project; and indicates whether a new significant impact or a substantial increase in an identified impact would occur. No new significant impacts or substantial increase in the severity of an impact related to hazards and hazardous materials not previously disclosed in the 2002 EIR as Addended would occur with implementation of the Proposed Project.

Table 3.7-1. Impacts Related to Hazards and Hazardous Materials

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact HAZ-1: Would the Proposed Project create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	SCA HAZ-1, SCA HAZ-2, ~~SCA HAZ-3,~~ and SCA HAZ-7	Proposed Project would not create a substantial hazard through the routine transport, use or disposal of hazardous materials	Less than significant	No
Impact HAZ-2: Would the Proposed Project create a substantial hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	SCA- HAZ-1, SCA- HAZ-2, and SCA- HAZ-3	Proposed Project would not create a substantial hazard by an accidental release of the hazardous materials into the environment	Less than significant	No
Impact HAZ-3: Would the Proposed Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, or be another known or suspected contaminated site that would (1) create a significant hazard to the public or the environment, (2) exceed the acceptable excess cancer risk range of 1 x 10^{-5} for commercial or industrial land uses as set forth in the Oakland Urban Land Redevelopment Program Guidance Document (City of Oakland 2000), or (3) exceed the acceptable excess cancer risk range set in the National Contingency Plan (1 x 10^{-6} to 1 x 10^{-4}) for other uses?	Mitigation Measure 4.7-4, Mitigation Measure 4.7-5, Mitigation 4.7-10, SCA- HAZ-1, SCA- HAZ-2, and SCA- HAZ-7	Proposed Project could potentially encounter hazardous materials	Less than significant with mitigation	No

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3.8 HYDROLOGY AND WATER QUALITY

This section identifies potential hydrology and water quality impacts of the Proposed Project; evaluates whether the Proposed Project would result in new significant hydrology and water quality impacts not identified in the 2002 EIR as Addended; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to Project changes, changes in setting, or new information. Previously identified mitigation measures and SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

3.8.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

Regulations relevant to hydrology and water quality that have occurred since the 2012 Addendum include the following:

- In 2013, the San Francisco Bay Area RWQCB issued the Phase II Small MS4 Permit under which the Port is classified as a Non-Traditional Small MS4 (General Permit No. CAS000004, Water Quality Order No. 2013-0001-DWQ);
- In 2014, the SWRCB adopted the General Permit for Storm Water Discharges Associated with Industrial Activities (IGP) (Order 2014-0057-DWQ). The permit became effective on July 1, 2015 and replaced the 1997 statewide permit for industrial storm water (Order 2014-0057-DWQ);
- In 2015, the Port adopted Ordinance No. 4311 to comply with applicable waste discharge requirements under the Phase II Small MS4 Permit and provide legal authority to control discharges to the Port's storm drainage system;
- In 2015, the Port prepared the PCSDM for source control, site design, and low-impact development measures, which provides guidance in complying with the Phase II Small MS4 Permit (Provision F.5.g.) and Port Ordinance 4311;
- In 2016, the City adopted its 2016-2021 Local Hazard Mitigation Plan (LHMP), which is an update to the 2010-2015 LHMP, and compliments the City's ongoing disaster, emergency, and resilience planning effort. The LHMP is an appendix to the Safety Element of the City's General Plan and includes the City's 100-year and 500-year floodplain maps;
- In 2017, the RWQCB updated the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), which establishes water quality objectives and beneficial uses of surface waters and groundwater in the San Francisco Bay Region;
- In 2017, the SWRCB issued Water Code 13383 (Trash Amendments), which requires traditional and non-traditional Small MS4 permittees to comply with trash control implementation requirements and compliance milestones to demonstrate progress towards 100 percent compliance with the Trash Amendments;

- In 2019, RWQCB's General Waste Discharge Requirements for Discharge or Reclamation of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by VOCs, Fuel Leaks, Fuel Additives, and Other Related Wastes (VOC and Fuel General Permit) (National Pollutant Discharge Elimination System [NPDES] No. CAG912002, RWQCB Order No. R2-2017-0048 effective January 1, 2019) established effluent limits allowed for VOCs, fuel compounds, and other wastes. In compliance with this permit, any accumulated groundwater and non-stormwater resulting from dewatering activities would be required to be treated on-site using an active treatment system or discharged to a local publicly owned treatment works; and

- In 2019, the Port approved its Sea Level Rise Assessment to comply with AB 691, which requires that a sea level rise assessment be completed for areas under the jurisdiction of the State Lands Commission. The study includes an impact assessment; maps showing affected areas for years 2030, 2050, and 2100; financial costs of the impacts; and a description of protection measures.

ENVIRONMENTAL SETTING

Existing conditions relating to hydrology and water quality have not changed substantially from the regional and local setting identified in the 2002 EIR as Addended.

The western and northern perimeters of the Project site are situated along Oakland's Outer Harbor, which is part of Central San Francisco Bay. Central San Francisco Bay is a 303(d) listed waterbody and is impaired for chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, dioxin compounds, furan compounds, invasive species, mercury, polychlorinated biphenyls (PCBs), selenium, and trash. As identified in the 2002 EIR as Addended, Total Maximum Daily Loads (TMDL) for Mercury and PCBs have been established for Central/San Francisco Bay and include waste load allocations for numerous contributing sources (SFBRWQCB 2017).

The Project site is fully paved and relatively level with a ground surface elevation ranging from approximately 12 to 15 feet (Port Datum) (ENGEO 2018). Stormwater runoff drains into catch basins located on the western and northern perimeters of the Project site, as well as throughout the site's interior. Four rows of storm drainage pipes located parallel to Berths 20 and 21 convey water towards five storm drain outfalls on the site's northern perimeter, which empty directly into the Harbor.

Groundwater at the Project site is estimated to be encountered at depths of 5 to 7 feet below ground surface based on existing boring logs, proximity to the Bay and mapped historic groundwater in the area. However, groundwater is likely to fluctuate several feet daily with the tide and may also change due to variations in rainfall and irrigation practice (Appendix E, *Geotechnical Conditions Report*).

The SFBRWQCB identified 13 distinct areas of major groundwater pollution (i.e., areas with plumes greater than 1,000 feet in length) within the East Bay Plain Subbasin (California Department of Water Resources [DWR] 2004), which underlies the Project site. None of these plumes are within close proximity to the Project site. Two former UST sites associated with the Former OAB are located approximately 125 feet and 330 feet north of the Project site respectively, at the current Academy of Truck Driving site (SWRCB 2020). These sites are closed and are both considered to have a low-groundwater risk (SFBRWQCB 2006a, 2006b). Additionally, as discussed in Section 3.~~6~~7, "Hazards and Hazardous Materials," two former LUST clean-up sites are located approximately 500 feet south of the Project site; clean-up activities at these two sites are complete and the cases have been closed since 1995 and 1996 (SWRCB 2020).

3.8.2 Summary of Prior Analysis

Impacts and mitigation measures in the 2002 EIR as Addended were reviewed for potential applicability to the Proposed Project. Impacts and the associated mitigation measures that may apply to the Proposed Project are summarized below.

The 2002 EIR as Addended concluded that the following impacts related to hydrology and water quality from the OAB Area Redevelopment Plan would be less than significant:

- **Impact 4.15-2:** Under certain circumstances, disturbance of soils during construction could result in erosion, which in turn could increase sediment loads to receiving waters.
- **Impact 4.15-3:** During construction or remediation, shallow groundwater may be encountered that could be contaminated with sediment or chemicals, and could enter nearby receiving waters as could contaminated stormwater.
- **Impact 4.15-4:** Net changes in impervious surface could result in higher pollutant loads to receiving waters.
- **Impact 4.15-6:** New construction could result in changes in localized flooding.

For the potentially significant impacts related to disturbance of soils during construction, the 2002 EIR as Addended identified the following SCA to reduce impacts from the OAB Area Redevelopment Plan to a less-than-significant level:

- **SCA HYD-1: Stormwater Pollution Prevention Plan (SWPPP):** (*Note: This SCA would be superseded by the Port's Development Permit, which requires a Small Project SWPPP for projects that disturb less than one acre.*)
- **SCA HAZ-1: Best Management Practices for Soil and Groundwater Hazards:** See Section 3.7, "Hazards and Hazardous Materials."
- **SCA GEO-1: Erosion and Sedimentation Control Plan:** See Section 3.5, "Geology and Soils."

For the potentially significant impacts related to encountering contaminated shallow groundwater during construction or remediation, the 2002 EIR as Addended identified the following SCA to reduce impacts from the OAB Area Redevelopment Plan to a less-than-significant level:

- **SCA HYD-1: Stormwater Pollution Prevention Plan (SWPPP):** Refer to text above.
- **SCA HAZ-1: Best Management Practices for Soil and Groundwater Hazards:** See Section 3.7, "Hazards and Hazardous Materials."

For the potentially significant impacts related to net changes in impervious surfaces, the 2002 EIR as Addended identified the following mitigation measure and SCA to reduce impacts from the OAB Area Redevelopment Plan to a less-than-significant level:

- **Mitigation Measure 4.15-5:** Post-construction controls of stormwater shall be incorporated into the design of new redevelopment elements to reduce pollutant loads. *(Note: This mitigation measure would be superseded by the Port's Phase II MS4 Permit (Order No. 2013-0001-DWQ)*).

- **SCA HYD-1: Stormwater Pollution Prevention Plan (SWPPP):** Refer to text above.

- **SCA HYD-2: Post-Construction Stormwater Management Plan:** (*Note: This SCA would be superseded by Port policies. Post-construction stormwater management facilities would comply with Provision F.5.g of the Port's Phase II MS4 Permit (Order No. 2013-0001-DWQ) and the Port's 2015 PCSDM. Additionally, the Applicant would be required to submit a Post-Construction Stormwater Management Plan to the Port. Provision C.3 of the NPDES permit issued to the Alameda Countywide Clean Water Program does not apply to this project as it has been superseded by these more recent regulations.*)

- **SCA HYD-3: Maintenance Agreement for Stormwater Treatment Measures:** (*Note: This SCA would be superseded by Port policies. Post-construction stormwater management facilities would comply with Provision F.5.g of the Port's Phase II MS4 Permit (Order No. 2013-0001-DWQ) and the Port's 2015 PCSDM; Port standard maintenance agreements would apply. Provision C.3 of the NPDES permit issued to the Alameda Countywide Clean Water Program does not apply to this project as it has been superseded by these more recent regulations.*)

- **SCA GEO-1: Erosion and Sedimentation Control Plan:** See Section 3.5, "Geology and Soils."

For the potentially significant impacts related to localized flooding (Impacts 4.15-6), the 2002 EIR as Addended identified the following mitigation measure to reduce impacts from the OAB Area Redevelopment Plan to a less-than-significant level:

- **Mitigation Measure 4.15-7:** New development shall conform with policies of the City's Comprehensive Plan Environmental Health Hazards Element regarding flood protection. (*Note: Flooding is now addressed in the Safety Element of the City's General Plan.*)

The Proposed Project differs from the OAB Area Redevelopment Plan by changing a portion of a terminal designated for container cargo to bulk construction aggregates. The installation of new stormwater infrastructure associated with the change would benefit water quality; however, construction activities would have the potential to degrade surface and groundwater quality during construction. Potential impacts associated with the Proposed Project area are discussed in more detail below.

3.8.3 Impacts and Mitigation Measures

The Proposed Project was evaluated against applicable significance criteria from the 2002 EIR as Addended. The Proposed Project would have a significant impact on the environment if it would:

- Violate any water quality standards or waste discharge requirements;

- Result in substantial erosion or siltation on or off site that would affect the quality of receiving waters;

- Result in flooding on or off site; or
- Create or contribute runoff that would be an additional source of polluted runoff.

IMPACTS

Impact HYD-1: Would the Proposed Project violate any water quality standards or waste discharge requirements?

The 2002 EIR as Addended concluded that during construction or remediation, shallow groundwater may be encountered that could be contaminated with sediment or chemicals and could enter nearby receiving waters, as could contaminated stormwater (Impact 4.15-3). Construction activities associated with the Proposed Project would include asphalt cutting and removal, pile driving, installation of concrete foundations, placement of perimeter containers and/or fencing, and erecting structures (e.g., conveyors and scale house). Excavation would also be necessary for the truck tire wash storage tank, ~~stormwater retention pond,~~ bioretention treatment basin, and placement of underground utilities including HDS vault filters (or other approved stormwater vault treatment system[21]). These ground-disturbing activities could potentially encounter shallow groundwater and provide a pathway for sediment-laden and/or hazardous materials to enter groundwater. Improper disposal of dewatering effluent could also adversely affect water quality if polluted dewatered groundwater were to enter surface water or groundwater. Construction would also include the potential storage, use, transport, and/or disposal of hazardous materials (e.g., fuels, oils, solvents) used for construction equipment. Accidental spills of these materials or improper material disposal could pose a risk to the groundwater underlying the spill or disposal area if the materials seep into the soil or groundwater.

As discussed in Section 3.~~6~~7, "Hazards and Hazardous Materials," construction activities would involve limited transport, use, and disposal of hazardous materials. These activities would be performed in compliance with all applicable federal, state, and local hazardous materials and hazardous waste regulations. The area of disturbance is less than one acre, so a construction general permit would not be required. The Applicant would prepare a Small Project SWPPP as part of the submittals for the Port Development Permit application. Compliance with applicable regulations and permit requirements would prevent substantial impacts to surface or groundwater quality from occurring~~,~~. Further, implementation of SCA HAZ-1 would include measures to safely stockpile and/or transport excavated soil and protect groundwater through on-site containment and disposal pursuant to applicable laws and policies.

During operation, higher sediment loads from aggregate piles, in addition to polluted runoff originating from elsewhere on the site, could enter receiving waters and potentially violate water quality standards. However, runoff originating from aggregate piles would flow through subsurface HDS, which would filter out sediment and other pollutants prior to being conveyed to the storm drain outfalls located at Berth 20 and Berth 10. As discussed in Section 3.~~6~~7, "Hazards and Hazardous Materials," on-site stockpiles of ERA construction aggregates would contain less than 5 percent quartzite, a mineral consisting predominately of crystalline silica (see Safety Data Sheet in Appendix B). On its own, crystalline silica is not deleterious to water quality beyond the typical movement of turbid water or siltation that could

[21] Stormwater treatment system to follow Basic Treatment per the Washington Department of Ecology Technology Assessment Protocol – Ecology (TAPE): https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies.

potentially result due to runoff from aggregate piles. However, as mentioned above, the subsurface HDS would filter out sediment prior to discharge. Thus, crystalline silica would not pose any additional pollutant concerns with respect to stormwater runoff to the Outer Harbor.

Additionally, runoff originating from the eastern portion of the site (i.e., where there are no aggregate piles) would flow throw an approximately 990-square-foot bioretention treatment basin, which would reduce sediment and pollutant loads prior to discharging into the storm drain system. Runoff originating from the western portion of the site (i.e., where there are ~~no~~ aggregate piles) would flow through subsurface HDS, which would filter out sediment and other pollutants prior to being conveyed to the existing storm drain system which discharges to the Bay ~~enter a 57,600-gallon stormwater retention pond, which would settle out sediment and debris before runoff enters the storm drain system~~. Given these post-construction measures, it is not anticipated that water quality violations or waste discharge violations would occur.

Finally, with regard to the proposed truck tire wash system(s), the system would be self-contained with wash troughs to capture and reuse wash water. The tire wash water collection tank would be discharged to the sanitary sewer; thus, no additional site runoff would occur with the potential to release sediment or pollutant loads into the storm drain system.

The Proposed Project would not violate any water quality standards or waste discharge requirements. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Impact HYD-2: Would the Proposed Project result in substantial erosion or siltation on or off site that would affect the quality of receiving waters?

The 2002 EIR as Addended concluded that under certain circumstances, disturbance of soils during construction could result in erosion, which in turn could increase sediment loads to receiving waters (Impact 4.15-2). Construction activities associated with the Proposed Project would involve demolition, site preparation and grading, paving, and construction of Project components (e.g., ship unloading hopper, overhead conveyer system, barge reclaim system, scale house building, and utility infrastructure). Thus, there is potential for sediment, debris, and other contaminants to enter receiving waters, which could adversely impact fish and other aquatic species.

However, the Proposed Project would require preparation of a Small Project SWPPP as part of the submittals for the Port Development Permit application. Specifically, the SWPPP would include BMPs such as fiber rolls or other sediment controls, wind erosion control, stabilized construction entrances/exits, and non-stormwater and waste management, which would serve to avoid or minimize substantial erosion or siltation. Additionally, implementation of SCA GEO-1 would require an erosion and sedimentation control plan, including devices to trap, store, and filter out sediment. A City Grading Permit would also be required for the building foundation design. Finally, implementation of SCA HAZ-1 would address the potential risk of contaminated soils encountered during excavation through on-site containment and disposal in accordance with applicable laws and policies.

During operation, siltation could potentially occur from runoff originating from aggregate piles. However, as previously discussed, subsurface HDS would filter out sediments that would accumulate in stormwater runoff prior to conveyed to stormwater outfalls. In addition, siltation and sediment in runoff would be captured with the site sweeper or other pre-treatment prior to runoff entering the

bioretention treatment basin. Finally, siltation and sediment from tire wash water (i.e., from the truck tire wash system) would be separated and collected via a dirt scraper conveyer prior to wash water flow to the sanitary sewer for discharge.

The Proposed Project would not result in substantial erosion or siltation on or off site that would affect the quality of receiving waters. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Impact HYD-3: Would the Proposed Project result in flooding on or off site?

The 2002 EIR as Addended concluded that impacts could occur related to localized flooding (Impact 4.15-6). The Proposed Project site is located in a Federal Emergency Management Agency (FEMA)-designated 100-year flood zone (City of Oakland 2016). While there is a low annual probability of significant flooding, the risk of project inundation is still possible during extremely wet winters. The Proposed Project would include new storm drainage pipes and catch basins, which would facilitate site drainage and reduce the likelihood of flooding on site. Additionally, an 8-inch asphalt curb would also be installed around the site's periphery in addition to asphalt speed bump ramps at site access points in order to prevent stormwater from draining off the site.

The Proposed Project would also include ~~a~~ an open, above ground steel water tank, approximately 125 feet in diameter and 12 feet high, on the north side of the Ship Unloading Hopper. The tank would have a one-million-gallon capacity sustained by pumped clean water from the self-unloading OGV ~~-~~holds and additionally by EBMUD recycled water when needed. This water would be consistently drawn down between OGV ship calls due to the need for dust control during offloading of construction aggregates from each OGV (approximately 65,000 gallons) and to maintain stockpile moisture levels and provide dust control during material storage and transfer (up to 10,000 GPD),~~stormwater retention pond (65 feet long by 45 feet wide) with a capacity of 7,700 cubic feet (57,600 gallons), designed for a 100-year storm. The retention pond would be located in the southwest portion of the site and would receive flows from a sub-drainage area in the vicinity of the storage tanks, feed conveyor, and truck over pass. Accumulated runoff would either evaporate or get pumped to one of 20 on-site storage tanks, each with a 10,000-gallon capacity. The retention pond would also have an overflow connection to the storm drain system, which would further prevent on-site flooding during heavy rain events.~~ Consistent with Mitigation Measure 4.15-7, which ensures that all measures related to flood protection are in compliance with applicable policies of the Safety Element of the City's General Plan, the Proposed Project has been designed to conform with these policies. Therefore, there would not be a significant flooding impact.

The Proposed Project would not result in flooding on or off site. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Impact HYD-4: Would the Proposed Project create or contribute runoff that would be an additional source of polluted runoff?

The 2002 EIR as Addended concluded that net changes in impervious surface could result in higher pollutant loads to receiving waters (Impact 4.15-4). The Proposed Project would disturb approximately ~~42,780~~39,855 square feet or ~~0.98~~0.91 acre during construction, including asphalt removal and cutting,

pavement replacement, and installation of an 8-inch asphalt curb around the site's periphery to prevent stormwater from draining off the site. Additionally, once in operation, potentially higher sediment loads from aggregate piles could create another source of polluted runoff during rain events, and from daily moistening of aggregate. In particular, water from the OGV ship holds used for moistening aggregate materials and for dust control during Project operation would have the potential to be a source of stormwater pollution if found to contain contaminants or pollutants at levels in excess of water quality and waste discharge thresholds. However, results from recent water quality tests indicate that the OGV ship hold water did not pose any exceedances for the following parameters: metals, volatile organics, pesticides, enterococcus, salinity, or cyanobacteria; therefore, it would not pose a threat to the Bay (See Appendix G, *Ocean Going Vessel Hold Water Quality Analysis*). Furthermore, water applied for dust control and to maintain stockpile moisture would be applied so as to avoid increased runoff from the Project site.

During construction, the contractor would prepare and implement an erosion and sedimentation control plan (SCA GEO-1) to prevent sediment from being transported into the Bay. Additionally, implementation of a Small Project SWPPP, as part of the submittals for the Port's Development Permit application, would eliminate or reduce discharge of materials to stormwater through proper equipment storage, BMPs, and regular monitoring. Compliance with these measures would prevent substantial impacts to surface or groundwater quality from occurring during construction.

Under its Phase II MS4 Permit, the Port is required to develop post-construction standards to address stormwater discharges from new development and redevelopment projects (Provision F.5.g). Additionally, given that the Proposed Project would replace over 5,000 square feet of impervious surface, it is considered a "Regulated Project" per the Port's PCSDM, requiring a site assessment and implementation of source control, site design, and treatment measures. As such, the Applicant would install an approximately 990-square-foot bioretention treatment basin to capture and treat stormwater from the eastern portion of the site across from the scale house. The system would be vegetated, consisting of mulch and planting media, overlain on a permeable layer such as gravel, overlain on drain rock with an impervious liner along the bottom. An underdrain would be located beneath the subsurface drainage layer with an overflow connection to an adjacent storm drainage pipe. Runoff would be conveyed to a 30" storm main east of the Project site within a 48-hour period and would ultimately discharge to an outfall northeast of the Project site at Berth 10. This system would be designed per the PCSDM and subject to Port approval to treat the site's Regulated Area of replaced impervious surface. This would reduce sediment and pollutant loads prior to discharging into the storm drain system. In addition, a Port standard maintenance agreement would also apply to the Proposed Project to ensure that the bioretention treatment basin is regularly inspected and maintained.

The Proposed Project would include new storm drainage pipes that would be installed along the northern and southern perimeter of the site along with new catch basins. Runoff entering the new storm pipes would flow through one of two subsurface HDS, which would filter out sediment and other pollutants prior to being conveyed to the storm drain outfalls north of the Project site. The HDS vault filters would serve as treatment for runoff originating from the subwatersheds of the site that contain aggregate piles as well as from a sub-drainage area in the vicinity of the feed conveyor and truck overpass. ~~The proposed stormwater retention pond would capture runoff on the western portion of the site (i.e., where there are no aggregate piles), which would settle out sediment and debris before accumulated runoff would either stored on site for reuse or enter the storm drain system.~~

The Proposed Project would also include a truck tire wash system(s) that would be self-contained with wash troughs to capture and reuse wash water. The tire wash water collection tank would discharge to the sanitary sewer; thus, no additional site runoff would occur with the potential to release sediment or pollutant loads into the storm drain system.

Finally, under the IGP, the Proposed Project would be required to prepare an on-site operational SWPPP, including development of a site map, identification of non-stormwater discharges, and an identification and assessment of potential pollutants sources resulting from exposure of industrial activities to stormwater. The Applicant would also need to identify and implement a number of structural and non-structural BMPs (e.g., Good Housekeeping, Spill and Leak Prevention and Response, Employee Training Program, etc.) to reduce and prevent pollutants in their discharge. Finally, monitoring data would be used to determine the effectiveness of stormwater treatment practices and whether additional treatment measures would be necessary to comply with the IGP. With these post-construction measures, impervious surfaces would not contribute additional sources of polluted runoff.

The Proposed Project would not create or contribute runoff that would be an additional source of polluted runoff. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Table 3.8-1 lists those impacts from the 2002 EIR as Addended that apply to the Proposed Project; indicates SCA and/or mitigation measures that would apply to the Proposed Project; and indicates whether a new significant impact or a substantial increase in an identified impact would occur. No new significant impacts or substantial increase in the severity of an impact related to hydrology and water quality not previously disclosed in the 2002 EIR as Addended would occur with implementation of the Proposed Project.

Table 3.8-1. Impacts Related to Hydrology and Water Quality

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact HYD-1: Would the Proposed Project violate any water quality standards or waste discharge requirements?	SCA-HAZ-1	Proposed Project would not result in water quality violations or waste discharge violations	Less than significant	No
Impact HYD-2: Would the Proposed Project result in substantial erosion or siltation on or off site that would affect the quality of receiving waters?	SCA-HAZ-1 and SCA-GEO-1	Proposed Project would not result in substantial erosion or siltation affecting the quality of receiving waters	Less than significant	No
Impact HYD-3: Would the Proposed Project result in flooding on or off site?	None	Proposed Project would not contribute to flooding risks	Less than significant	No
Impact HYD-4: Would the Proposed Project create or contribute runoff that would be an additional source of polluted runoff?	SCA-GEO-1	Proposed Project would not substantially contribute polluted runoff to receiving waters	Less than significant	No

3.9 LAND USE

This section identifies potential land use impacts of the Proposed Project; evaluates whether the Proposed Project would result in new significant impacts to land use or potential conflicts with adopted plans and policies not identified in the 2002 EIR as Addended for the OAB Area Redevelopment Plan; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to Project changes, changes in setting, or new information. Previously identified mitigation measures and SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

3.9.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

Regulations relevant to land use that have occurred since the 2012 Addendum include the following:

- In 2014, the City prepared the West Oakland Specific Plan (WOSP) (City of Oakland 2014), which provides the guiding framework for realizing the vision of a healthy, vibrant West Oakland. The Specific Plan includes strategies for the reuse of vacant and/or underutilized properties, establishes a land use framework, identifies needed transportation and infrastructure improvements, and recommends strategies needed to implement those improvements. The Project site is adjacent to, but not within, the WOSP area.

- In 2017, the Metropolitan Transportation Commission (MTC)]/ABAG released the Plan Bay Area 2040 (MTC/ABAG 2017), an update to the original Plan Bay Area (2017). Plan Bay Area 2040 provides a framework to develop an efficient transportation network, provide more housing choices, and ensure the Bay Area grows in a financially and environmentally responsible way.

ENVIRONMENTAL SETTING

Prior to March 2016, the Project site was part of an active marine container terminal. Since then, the Project site has been used on an interim basis for AMS such as overnight truck and month-to-month parking and shipping container/chassis storage/staging.

The Project site lies within the boundary of OAB Redevelopment Area, specifically within the Maritime Sub-district. The City's General Plan classifies this area as General Industry and Transportation. Existing land uses in the vicinity of the Project site consist entirely of maritime, industrial, and transportation uses.

3.9.2 Summary of Prior Analysis

Impacts and mitigation measures in the 2002 EIR as Addended were reviewed for potential applicability to the Proposed Project. Impacts and the associated mitigation measures that may apply to the Proposed Project are summarized below.

The 2002 EIR as Addended concluded that a potentially significant impact related to dissimilar land uses between the Port and the City's Gateway development area could occur if Variant A, consisting primarily of research and development, office, and light industry, for the City's Gateway Area, was implemented;

this was identified as Impact 4.2-1, listed below. However, Variant B, consisting only of recycling facilities, warehousing and other ancillary maritime uses, was implemented and this significant land use impact would therefore not occur:

- **Impact 4.2-1:** Under the proposed redevelopment, dissimilar land uses may be located proximate to one another.

The Proposed Project differs from the OAB Area Redevelopment Plan by changing a portion of a terminal designated for container cargo to bulk construction aggregates. The different structures associated with this change could have the potential to conflict with adjacent or nearby land uses. Potential impacts associated with the Proposed Project area discussed in more detail below.

3.9.3 Impacts and Mitigation Measures

The Proposed Project was evaluated against applicable significance criteria from the 2002 EIR as Addended. The Proposed Project would have a significant impact on the environment if it would:

- Result in a fundamental conflict between adjacent or nearby land uses; or

- Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment.

IMPACTS

Impact LU-1: Would the Proposed Project result in a fundamental conflict between adjacent or nearby land uses?

The 2002 EIR as Addended concluded that no significant impacts would occur with regard to the proximity of dissimilar land uses between the Port and the City's Gateway Development Area with Variant B (recycling facilities, warehousing, and other ancillary maritime uses) (Impact 4.2-1). Although the Proposed Project would involve changing a portion of a terminal designated for container cargo to bulk construction aggregates, it does not affect or otherwise inhibit the use and development of the City's Gateway Development Area, in which warehousing and ancillary maritime uses per Variant B are being implemented.

In addition, it is not anticipated that there would be any conflicts with adjacent or nearby land uses. Most of the Port marine terminals are used as container terminals and other existing maritime activities within the Port maritime area include transfer of containers to and from trucks and trains, maritime-related ancillary services, and warehouse storage and distribution. Thus, operation of the Proposed Project would be consistent with existing uses. The truck volumes associated with the Proposed Project would be less than but similar to what would occur with an active container terminal, and therefore would not interfere with access to or use of other terminals or facilities in the Port.

The Proposed Project would not result in a fundamental conflict between adjacent or nearby land uses and no significant impacts would occur. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation is required.

Impact LU-2: Would the Proposed Project fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment?

The 2002 EIR as Addended concluded that no significant impacts would occur with regard to inconsistencies with an adopted plan or policy. The Proposed Project would not conflict with any local plans or policies adopted for the purpose of avoiding or mitigating an environmental effect. As described in Chapter 2, *Project Description*, the Proposed Project would be consistent with several redevelopment objectives for the OAB Redevelopment Area, including strengthening the economic base in West Oakland and providing for safe, efficient, and effective movement of people and goods.

Although the Project site is not located within the WOSP area, the Project was evaluated for consistency with the WOSP. The Proposed Project would continue to support maritime terminal activity at the Port and would also be consistent with Economic Objectives 1 and 4 of the WOSP: 1) Create new employment opportunities at living wages, and 4) Rehabilitate underutilized, vacant, and neglected properties. By incorporating on-site green stormwater infrastructure to protect water quality and low-emissions equipment to reduce air quality impacts, the Proposed Project would also be consistent with Environmental and Sustainable Development Objective 3) Promote the environmental health of the community through new development; and Infrastructure Objectives 6) Promote energy efficiency throughout all aspects of new development and redevelopment, and 8) Encourage sustainable development that incorporates innovative approaches to stormwater management and air pollution mitigation, and continues to enhance the well-being of residents of West Oakland. For a discussion of the air quality impacts and mitigation measures that would apply to the Proposed Project, see Section 3.~~3~~4, "Air Quality." Given the industrial location and nature of the Proposed Project, many of the other Community Planning Goals and Objectives of the WOSP would not be applicable, including those related to housing, public transportation, and socio-cultural goals.

Similarly, given that the Proposed Project would involve continued maritime activities, it would also support the Plan Bay Area 2040 Economic Vitality Goal through consistency with Performance Target 9: Increase jobs in middle-wage industries. Additionally, by using low-emissions equipment to reduce air quality impacts, it would also support the Health and Safe Communities Goal through consistency with Performance Target 3: Reduce adverse health impacts. Given the location and nature of the Proposed Project, several Goals would not be applicable, including those related to housing, climate change, open space protection, equitable access, and transportation.

BCDC's San Francisco Bay Plan (Bay Plan) (BCDC 1969) was established to protect, enhance, and ensure responsible use of the Bay and the adjacent shoreline band. The Proposed Project would not conflict with applicable policies of the Bay Plan, including the following Port Policies:

1. Port planning and development should be governed by the policies of the Seaport Plan and other applicable policies of the Bay Plan.

2. Some filling and dredging will be required to provide for necessary port expansion, but any permitted fill or dredging should be in accord with the Seaport Plan.

3. Port priority use areas should be protected for marine terminals and directly-related ancillary activities such as container freight stations, transit sheds and other temporary storage, ship

> repairing, support transportation uses including trucking and railroad yards, freight forwarders, government offices related to the port activity, chandlers, and marine services. Other uses, especially public access and public and commercial recreational development, should also be permissible uses provided they do not significantly impair the efficient utilization of the port area.

The Project site is consistent with Policy 3, as it is currently located within a Bay Plan-designated port priority use area and would continue to support marine terminal activity as a construction aggregates import, storage, and distribution marine terminal and would not impair the efficient utilization of the Port area. The Proposed Project would also not involve the use of fill or require dredging activities in the Outer, Middle, or Inner Harbors, consistent with Policy 2.

With regard to consistency with the San Francisco Bay Seaport Plan (Policy 1), the following policies would be applicable to the Proposed Project:

> Marine Terminals Policy 2: Future marine terminals should be developed for the type of cargo specified in Part II of this plan at each port and port priority use area. If a port or terminal operator proposes to use a terminal for a cargo other than that designated in the Seaport Plan, the project proponent must demonstrate to the Seaport Planning Advisory Committee that the proposed project does not prevent Bay Area ports from achieving adequate cargo throughput capability to meet the 2020 projections. In reviewing such requests, the Seaport Planning Advisory Committee should make use of the cargo monitoring data that will be collected as part of the implementation of this plan (see Responsibilities of Other Agencies in Part III of this plan).
>
> Container Terminal Policy 4: Container terminals may be used for bulk cargo or combined bulk and container cargo until the terminal is needed for container cargo shipping, provided the non-container cargo use would not impair the current or future use of the terminal for container shipping.
>
> Bulk Terminals Policy 3: In developing new bulk cargo terminals, the minimum amounts of backland shown in Table 7 should be provided for each berth.

The Proposed Project would not prevent Bay Area ports from achieving adequate cargo throughput capability (Marine Terminals Policy 2) based on the Project's changing a portion of a terminal designated for container cargo to bulk construction aggregates. Rather, it would increase resources for construction aggregates needed to meet demand in the State over the next 50 years (Tioga Group 2020). Additionally, use of the Project site, which is not currently used for container shipping, for construction aggregates would not impair the future use of the site for container shipping following the completion of the lease term (Container Terminals Policy 4). Further, as described in the Project Objectives, use of the site for construction aggregate materials storage and transport provides a beneficial cargo use of the Proposed Project site until such time that the Port requires additional capacity for container cargo. Finally, the Proposed Project would exceed the minimum backland area acreage requirement for new bulk terminals (i.e., 13 acres), as it would utilize 18 acres of Berth 20, 21, and 22 backlands for stockpiling and distribution (Bulk Terminals Policy 3).

The Proposed Project would not result in substantial conflicts with an adopted plan or policy. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Table 3.9-1 lists those impacts from the 2002 EIR as Addended that apply to the Proposed Project; indicates SCA and/or mitigation measures that would apply to the Proposed Project; and indicates whether a new significant impact or a substantial increase in an identified impact would occur. No new significant impacts or substantial increase in the severity of an impact related to land use or consistency with policies or plans not previously disclosed in the 2002 EIR as Addended would occur with implementation of the Proposed Project.

Table 3.9-1. Impacts Related to Land Use and Adopted Plans and Policies

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact LU-1: Would the Proposed Project result in a fundamental conflict between adjacent or nearby land uses?	None	Proposed Project would not conflict with adjacent or nearby land uses	Less than significant	No
Impact LU-2: Would the Proposed Project fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment?	None	Proposed Project would not conflict with an existing plan or result in a substantial physical change to the site	Less than significant	No

3.10 NOISE

This section identifies potential noise impacts of the Proposed Project; evaluates whether the Proposed Project would result in new significant noise impacts not identified in the 2002 EIR as Addended for the OAB Area Redevelopment Plan; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to Project changes, changes in setting, or new information. Previously identified mitigation measures and SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

3.10.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

No relevant changes to the regulatory setting relating to noise have occurred since the 2012 Addendum.

UPDATED ENVIRONMENTAL SETTING

Existing conditions relating to noise have not changed substantially from the regional and local setting identified in the 2002 EIR as Addended. The Port has continued to develop the surrounding area in a manner consistent with the 2002 EIR as Addended. The following description includes site-specific details related to noise.

The Proposed Project would be located within the Port's OHT. The OHT is bordered by an active marine container terminal (Trapac) to the south; the Outer Harbor and San Francisco Bay to the west; the Outer Harbor and I-80 to the north; and Maritime Street and industrial facilities to the east. In addition, a railway and I-880 lie to the east of the Project site. The closest residential noise receptor is located approximately one-half mile from the Project site across the railway and I-880.

The dominant noise sources on the Project site are traffic, port operations, railroad, and Bay Area Rapid Transit (BART) noise sources. As documented in the 2002 EIR as Addended, the hourly daytime and evening noise levels in the vicinity of the Proposed Project ranged from 62 A-weighted dBA to 68 dBA equivalent noise level (L_{eq}); nighttime hourly noise levels ranged from 49 dBA to 68 dBA L_{eq}. The 24-hour weighted average noise levels that were documented in the vicinity of the Proposed Project ranged from approximately 64 dBA to 68 dBA day-night average noise level (L_{dn}). The City's noise contours in the Noise Element of the General Plan show that traffic noise levels along I-880 to the east of the Proposed Project range up to 80 dBA L_{dn} as measured at 150 feet from the roadway centerline. The noise contours for the Union Pacific Railroad and BART rail lines are shown to reach 70 dBA L_{dn} at 280 feet from the centerline of the tracks.

The nearest airports to the Proposed Project are the Oakland International Airport and the San Francisco International Airport, located approximately 7 miles southeast and 13.5 miles southwest of the Proposed Project, respectively. The Project site is not located within the vicinity of a private airstrip or within an airport land use plan.

3.10.2 Summary of Prior Analysis

Impacts and mitigation measures in the 2002 EIR as Addended were reviewed for potential applicability to the Proposed Project. Impacts and the associated mitigation measures that may apply to the Proposed Project are summarized below.

The 2002 EIR as Addended concluded that the following impact would be less than significant:

- **Impact 4.5-2:** Operation of redevelopment facilities could result in a long-term increase in ambient noise levels.

The 2002 EIR as Addended concluded that the following impact would be less than significant with mitigation and SCA:

- **Impact 4.5-1:** Construction could result in short-term noise levels in excess of established standards, or that violate the City of Oakland Noise Ordinance at and near the redevelopment project area, and along construction haul routes.

The 2002 EIR identified the following mitigation measure to reduce significant impacts related to construction noise under Impact 4.5-1 for the entire OAB Area Redevelopment Plan.

- **Mitigation Measure 4.5-1:** Developers and/or contractors shall develop and implement redevelopment specific noise reduction plans. Each developer and/or contractor should be contractually required to demonstrate knowledge of the Oakland Noise Ordinance, and to construct in a manner whereby noise levels do not exceed significance criteria. Contractors may elect any combination of legal, non-polluting methods to maintain or reduce noise to threshold levels or lower, as long as those methods do not result in other significant environmental impacts or create a substantial public nuisance. The developer and /or contractor shall perform a site-specific acoustical analysis, and, if necessary, shall develop and implement a noise reduction plan subject to review and approval by the City or Port. The plan for attenuating these noises shall include some or all of the following measures, as appropriate and feasible, and shall be implemented prior to any required activities.

  Schedule:

  a) Schedule operation of one piece of equipment that generates extreme levels of noise at a time.

  b) Schedule activities that generate low and moderate levels of noise during weekend or evening hours.

  c) Standard construction activities shall be limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday. No construction activities shall be allowed on weekends until after the building is enclosed without prior authorization of the Building Services and Planning Divisions of the Community and Economic Development Agency, or unless expressly permitted or modified by the provisions of a building and/or grading permit.

  Pile Driving and/or Other Activities that Generate Extreme Levels of Noise for Noise Levels Greater than 90 dBA:

a) Pile-driving and/or other activities that generate noise above 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m., Monday through Friday, with no activity generating extreme levels of noise permitted between 12:30 and 1:30 p.m. No construction activities that generate extreme levels of noise shall be allowed on Saturdays, Sundays, or holidays unless expressly permitted or modified by the provisions of a building and/or grading permit.

b) Install engine and pneumatic exhaust controls as necessary to ensure exhaust noise from pile driver engines are minimized. Such controls can reduce noise levels b 6 dBA Leq.

c) Employ sonic or vibratory pile drivers (sonic pile drivers are only effective in some soils). Such drivers may reduce maximum noise levels by as much as 12 dBA (Lmax). In some cases, however (e.g., sheet pile driving) vibratory pile drivers may generate more noise than impact pile drivers/methods. The specific circumstances should be evaluated.

d) Tie rubber aprons lined with absorptive material around sheetpile.

e) Hydraulically drive piles.

f) Pre-drill pile holes.

g) Erect temporary plywood noise barriers around the entire construction site.

h) Use noise control blankets on the building structure as it is erected to reduce noise emission from the site.

i) Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings.

j) Monitor the effectiveness of noise attenuation measure by taking noise measurements.

Other Equipment, Methods:

a) A pre-construction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices are completed prior to the issuance of a building permit (including construction hours, neighborhood notification, posted signs, etc.)

b) All construction equipment, fixed and mobile, and motor-vehicles shall be properly maintained to minimize noise generation. This would include maintaining equipment silencers, shields, and mufflers in proper operating order. “Quit package” or “hush” equipment, which is readily available for such equipment as trailer-mounted compressors, welders, etc. shall be used. All equipment shall be operated in the quietest manner practicable.

c) Equipment and trucks used for construction shall use best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, wherever feasible).

d) Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated

with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed-air exhaust should be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, which could achieve a reduction of 5 dBA. Quieter procedures should be used, such as drills rather than impact equipment, where practicable.

e) Stationary noise sources should be located as far from sensitive receptors as possible, and they should be muffled and enclosed within temporary sheds, or insulation barriers, or other measures should be incorporated to the extent feasible.

f) Material stockpiles and/or vehicle staging areas should be located as far as practicable from dwellings. Public address systems would be designed and to minimize "spill over" of sound onto adjacent properties.

g) Physical barriers/screens (e.g., along fence lines) may be used to attenuate noise.

h) Project workers exposed to noise levels above 80 dBA would be provided personal protective equipment for hearing protection (i.e., ear plugs and/or muffs).

i) A process with the following components shall be established for responding to and tracking complaints pertaining to construction noise:

   i. A procedure for notifying City building Division staff and Oakland Police Department;

   ii. A list of telephone numbers (during regular construction hours and off-hours);

   iii. A plan for posting signs on-site pertaining to complaint procedures, permitted construction days and hours, day and evening contact telephone numbers for the job site and day and evening contact telephone numbers for the City in the event of a problem;

   iv. Designation of a construction complaint manager for the project who will respond to and track complaints; and

   v. Notification of neighbors within 300 feet of the project construction area at least 30 days in advance of construction activities.

(*Note: The 2002 EIR as addended includes several SCA which were added in the 2012 Addenda to replace the noise mitigation measure 4.5-1.*)

- **SCA NOI-1: Days/Hours of Construction Operation:**

  Ongoing throughout demolition, grading, and/or construction:

  The project applicant shall require construction contractors to limit standard construction activities as follows:

  a) Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Saturday, except that barging and unloading of soil shall be allowed 24 hours per day, 7 days per week for about 15 months.

b) Any construction activity proposed to occur outside of the standard hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division. The project applicant shall also submit an air quality report prepared by a qualified professional evaluating the air quality impacts of the special activities, if the duration of each activity exceeds 6 months.

c) No construction activity shall take place on Sundays or Federal holidays, except as noted above.

d) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

e) Applicant shall use temporary power poles instead of generators where feasible.

- **SCA NOI-2: Noise Control:**

  Ongoing throughout demolition, grading, and/or construction:

  To reduce noise impacts due to construction, the project applicant shall require construction contractors to implement a site-specific noise reduction program, subject to the Planning and Zoning Division and the Building Services Division review and approval, which includes the following measures:

  a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).

  b) Except as provided herein, Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available and this could achieve a minimum reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

  ~~a)~~c) Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.

  ~~b)~~d) The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

- **SCA NOI-3: Noise Complaint Procedures:**

  Ongoing throughout demolition, grading, and/or construction:

  Prior to the issuance of each building permit, along with the submission of construction documents, the project applicant shall submit to the Building Services Division a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:

  a) A procedure and phone numbers for notifying the Building Services Division staff and Oakland Police Department~~;~~ (during regular construction hours and off-hours);

  b) A sign posted on-site pertaining with permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours);

  c) The designation of an on-site construction complaint and enforcement manager for the project;

  d) Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities about the estimated duration of the activity; and

  e) A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

- **SCA NOI-5: Operational Noise-General:**

  Ongoing:

  Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

- **SCA NOI-6: Pile Driving and Other Extreme Noise Generators:**

  Ongoing throughout demolition, grading, and/or construction:

  To further reduce potential pier drilling, pile driving and/or other extreme noise generating construction impacts greater than 90 dBA, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted for review and approval by the Planning and Zoning Division and the Building Services Division to ensure that maximum feasible noise attenuation will be achieved. This plan shall be based on the final design of the project. A third-party peer review, paid for by the project applicant, may be required to assist the City in

evaluating the feasibility and effectiveness of the noise reduction plan submitted by the project applicant. The criterion for approving the plan shall be a determination that maximum feasible noise attenuation will be achieved. A special inspection deposit is required to ensure compliance with the noise reduction plan. The amount of the deposit shall be determined by the Building Official, and the deposit shall be submitted by the project applicant concurrent with submittal of the noise reduction plan. The noise reduction plan shall include, but not be limited to, an evaluation of implementing the following measures. These attenuation measures shall include as many of the following control strategies as applicable to the site and construction activity:

a) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;

b) Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;

c) Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;

d) Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and

e) Monitor the effectiveness of noise attenuation measures by taking noise measurements.

The Proposed Project differs from the OAB Area Redevelopment Plan by changing a portion of a terminal designated for container cargo to bulk construction aggregates. Construction activities, including the concurrent use of two pile drivers, would have the potential to generate significant levels of noise. Operation of the Proposed Project, in particular nighttime operation of the conveyor system, would have the potential to increase ambient noise levels. Potential impacts associated with the Proposed Project area discussed in more detail below.

3.10.3 Impacts and Mitigation Measures

The Proposed Project was evaluated against applicable significance criteria from the 2002 EIR as Addended. The Proposed Project would have a significant impact on the environment if it would:

- Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts;

- Generate noise in violation of the City nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise;

- Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise; or generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3 dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project); or

- Expose persons to or generate groundborne vibration that exceeds the criteria established by the FTA during either project construction or project operation.

IMPACTS

Impact NOI-1: Would the Proposed Project generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts?

The 2002 EIR concluded that OAB Area Redevelopment Plan construction activities would not produce short-term noise levels in excess of established standards (Impact 4.5-1) after mitigation. The 2012 Addendum concluded that, with incorporation of SCA, mitigation measures were not required and that the impact was less than significant.

Construction activities associated with the Proposed Project would include asphalt cutting and removal, pile driving, hauling trips associated with material import and export, installation of concrete foundations, placement of perimeter containers and/or fencing, and erecting structures (e.g., conveyors and scale house). Equipment required for construction would include two vibratory pile drivers operating simultaneously. Vibratory pile drivers can generate noise levels of 101 dBA at a distance of 50 feet (Federal Highway Administration [FHWA] [2006] and consistent with the noise estimate at 50 feet for pile driving in the 2002 EIR), and two pile drivers operating simultaneously would generate noise levels of 104 dBA. At a distance of one-half mile (the distance between the edge of the Project site and the nearest residential receptor) noise levels from the operation of two pile drivers would attenuate to 69.4 dBA, which is above the City's construction noise standard of 65 dBA for residential receiving land uses for construction activities lasting longer than 10 days. The nearest industrial receptor is located approximately 500 feet from the conveyors and the two pile drivers would attenuate to 84.0 dBA, which is above the City's construction standard of 70 dBA for industrial or commercial receiving land uses for construction activities lasting longer than 10 days. This results in a potentially significant impact for the Proposed Project construction noise compared to the City's noise ordinance. The implementation of the 2002 EIR Mitigation Measure 4.5-1 and SCA would reduce the noise levels associated with construction. In particular, SCA NOI-1 limits the construction hours and SCA NOI-2 requires noise controls during construction. SCA NOI-3 requires noise complaint procedures which also ensures construction noise issues are addressed. Mitigation Measure 4.5-1 and SCA NOI-6 specifically addresses the nosiest construction equipment associated with pile driving by requiring approval of a noise reduction plan prior to the start of construction, which specifies a menu of options to consider to reduce the noise from construction and pile driving in particular. Typical construction noise controls can reduce levels between 3-15 dBA individually and can combine to reduce them further (FHWA 2006). Therefore, it is feasible that there are noise controls that would be able to reduce the construction noise to the City's noise ordinance standards. These SCA require implementation of several noise reduction

measures (detailed above) prior to the start of construction. However, they are not mitigation measures and do not satisfy CEQA requirements to ensure that the potentially significant impact is reduced to less-than-significant levels because they lack specific performance metrics. Therefore, Mitigation Measure 4.5-1 from the 2002 EIR, would be implemented to provide specific performance metrics to the various SCA as applicable for the Proposed Project. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended, which was **less than significant with mitigation**.

Impact NOI-2: Would the Proposed Project generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise?

The 2002 EIR as Addended concluded that OAB Area Redevelopment Plan construction activities would not produce persistent, construction-related noise levels in excess of established standards (Impact 4.5-1). The City's nuisance standards require all construction equipment powered by an internal combustion engine to be properly muffled and maintained, no unnecessary idling of internal combustion engines, quiet construction equipment should be selected whenever possible, and use of pile drivers and jack hammers is prohibited on Sundays and holidays unless approved in advance by the City. These measures are contained in the aforementioned Mitigation Measure 4.5-1 and SCA NOI-2 and SCA NOI-6, which would be implemented during construction activities to reduce noise during pile driving activities as described in impact NOI-1. Additionally, implementation of SCA NOI-1 would limit construction hours and SCA NOI-3 would establish noise complaint procedures to address complaints.

With implementation of Mitigation Measure 4.5-1 and SCA NOI-1, NOI-2, NOI-3, and NOI-6, the Proposed Project would not generate noise in violation of the City of Oakland nuisance standards regarding persistent construction-related noise. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended, which was **less than significant with mitigation.**

Impact NOI-3: Would the Proposed Project generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise; or Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project?~~.~~

The 2002 EIR as Addended concluded that the OAB Area Redevelopment Plan would not generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the vicinity above levels existing without the redevelopment (Impact 4.5-2).

Operation of the Proposed Project may generate noise via operation of OGV auxiliary engines to discharge material, operation of the overhead conveyor system, operation of off-road equipment, and operation of trucks. Operation of OGV engines, off-road equipment, and trucks would be equivalent to operation of a cargo terminal. Total OGV calls, and truck trips would be fewer under the Proposed Project compared to operation of a cargo terminal of the same size and in the same location, as described in Section 3.~~3~~4, "Air Quality." Therefore, operation of these items would have impacts equal to or less than identified in the 2002 EIR as Addended.

Aggregate conveyors and transfer points can generate 72-96 decibels (dB) at a distance of approximately 25 feet (Centers for Disease Control 2007). The nearest off-site worker receptor is located

approximately 500 feet from a proposed conveyor, and the nearest residential receptor is located at least one-half mile from a proposed conveyor. Expected noise levels from the conveyors were estimated using the inverse square law:

$$Lp(R2) = Lp(R1) – 20 * Log10(R2/R1)$$

Where:

Lp(R1) = Sound pressure level at initial location
Lp(R2) = Sound pressure level at second location
R1 = Distance from the noise source to initial location
R2 = Distance from the noise source to the second location

Based on this formula and sound pressure of 96 dB at 25 feet, expected noise levels from the conveyors are approximately 70 and 55.3 dB for the nearest outdoor worker and residential receptors, respectively. These levels are below the daytime City Operational Noise Standards at Receiving Property Line but are above the residential nighttime levels. However, the ambient noise generated by I-880, BART, and other nighttime noise sources near the residential receptor are above the nighttime noise level and therefore only subject to further review if there is a resulting increase of more than 5 dBA or a cumulative increase of 5 dBa with 3 dBA attributable to the Proposed Project. A doubling of a sound source with equal strength would be necessary to increase the noise level by 3 dBA. Implementation of the Project would not result in such a doubling of noise sources in the Project vicinity, and ambient noise levels would not be expected to exceed existing ambient noise levels by an amount that would be considered perceptible by the human ear in an outdoor environment (3 dBA or greater) as measured at adjacent receiving properties. No significant impacts to ambient noise levels would occur. However, SCA NOI-5 would be applied to the Proposed Project to further reduce the effects of noise generated by Proposed Project operations. SCA NOI-5 does list specific performance standards consistent with the City's codes and thus no additional mitigation measures to enforce performance standards is required. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

Impact NOI-4: Would the Proposed Project expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA) during either project construction or project operation?

The operation of heavy construction equipment is a potential source of groundborne vibration. Demolition and grading activities are anticipated to include the use of bulldozers, excavator/backhoes, draglines, and front loaders. The Proposed Project would also include pile driving activities. Construction-related groundborne vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). The operation of the pile drivers would generate the groundborne vibration levels on the Project site. At a distance of 60 feet, the vibration levels from operation of pile driving equipment would attenuate to below the construction vibration damage threshold of 0.2 PPV for buildings of typical non-engineered timber and masonry construction. Additionally, implementation of SCA NOI-2 and SCA NOI-6 would further reduce potential groundborne vibration impacts during construction activities, while SCA NOI-1 would limit construction hours and SCA NOI-3 would establish noise complaint procedures to address complaints. Thus, there is no increase in the impact from construction generated vibrations.

As discussed in the 2002 EIR, the OAB Area Redevelopment operation nearest to residential uses that could result in vibration would be the intermodal rail yard. The proposed Project site would be approximately one-half mile from the nearest residential land use, with intervening structures of I-880 and existing sound barriers. Due to this distance of one-half mile, vibration generated by operational activities would not be perceptible at the nearest residential receptors. Implementation of SCA NOI-5 would be applied to the Proposed Project to reduce potential vibration effects generated during Project operations.

The Proposed Project would not generate groundborne vibration that exceeds the criteria during construction or operation... Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Table 3.10-1 summarizes the impacts from the 2002 EIR as Addended that apply to the Proposed Project; indicates SCA that would apply to the Proposed Project; and indicates whether a new significant impact or a substantial increase in an identified impact would occur. No new significant impacts related to noise not previously disclosed in the 2002 EIR as Addended would occur with implementation of the Proposed Project.

Table 3.10-1. Impacts Related to Noise

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact NOI-1: Would the Proposed Project generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts?	Mitigation Measure 4.5-1, SCA NOI-1, SCA NOI-2, SCA NOI-3, and SCA NOI-6	Proposed Project would not substantially generate noise in violation with established noise thresholds	Less than significant with mitigation	No
Impact NOI-2: Would the Proposed Project generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise?	Mitigation Measure 4.5-1, SCA NOI-1, SCA NOI-2, SCA NOI-3, and SCA NOI-6	Proposed Project would not generate construction-related noise in violation of established thresholds	Less than significant with mitigation	No
Impact NOI-3: Would the Proposed Project generate noise resulting in a 5 A-weighted decibel (dBA) permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	SCA NOI-5	Proposed Project would not substantially increase ambient noise levels	Less than significant	No

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact NOI-4: Would the Proposed Project expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA) during either project construction or project operation?	SCA NOI-1, SCA NOI-2, SCA NOI-3, SCA NOI ~~SCA~~ 5, and SCA NOI-6	Proposed Project would not substantially increase groundborne vibration levels	Less than significant	No

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3.11 TRANSPORTATION

This section identifies potential transportation impacts of the Proposed Project; evaluates whether the Proposed Project would result in new significant transportation impacts not identified in the 2002 EIR as Addended for the OAB Area Redevelopment Plan; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to project changes, changes in circumstances, or new information. Previously adopted mitigation measures and SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

3.11.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

Regulations relevant to air quality that have occurred since the 2012 Addendum include the following:

FEDERAL

- On December 4, 2015, the FHWA signed the Fixing America's Surface Transportation (FAST) Act (FHWA 2016) into law to provide long-term funding certainty for surface transportation infrastructure planning and investment. The FAST Act authorized $305 billion over fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology, and statistics programs.

  Under the FAST Act, the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) program was established. FHWA's ATCMTD program funds cutting-edge technologies that are ready to be deployed to enhance existing traffic capacity for commuters and businesses. The Alameda County Transportation Commission (ACTC) received a grant from the ATCMTD program for its Global Opportunities at the Port (GoPort) Program comprised of proposed projects to improve truck and rail access to the Port.

STATE

- In 2013, SB743 was signed into law, requiring the Governor's Office of Planning and Research (OPR) to identify new metrics for identifying and mitigating transportation impacts within CEQA. The criteria for determining the significance of transportation impacts must "promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses" (State of California 2013). OPR's most recent *Technical Advisory on Evaluating Transportation Impacts in CEQA* dated December 2018 (OPR 2018) provides guidance for assessing vehicle miles traveled (VMT), thresholds of significance, and mitigation measures. According to the CEQA Guidelines Section 15064.3, Subdivision (a), VMT "refers to the amount and distance of automobile travel attributable to a project" (OPR 2018).

- According to the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA*, "automobile" refers to "on-road passenger vehicles, specifically cars and light trucks" (OPR 2018). Thus, automobile VMT does not include heavy duty trucks.

REGIONAL

- MTC and ACTC jointly developed and published in February 2016 the San Francisco Bay Area Goods Movement Plan (MTC/ABAG 2016) and the Alameda Countywide Goods Movement Plan (ACTC 2016a). The goals of the Goods Movement Plan include: reduce and mitigate impacts from goods movement operations to create a healthy and clean environment, and support improved quality of life for people most impacted by goods movement; provide safe, reliable, efficient, resilient, and well- maintained goods movement facilities and corridors; promote innovative technology and policy strategies to improve the efficiency of the goods movement system; preserve and strengthen an integrated and connected, multimodal goods movement system that supports freight mobility and access, and is coordinated with passenger transportation systems and local land use decisions; and increase jobs and economic opportunities that support residents and businesses. The Regional Goods Movement Plan contains similar goals and was commissioned to support and underpin the upcoming Plan Bay Area 2040's approach to economic prosperity, described below.

- On July 26, 2017, MTC adopted Plan Bay Area 2040, Regional Transportation Plan and SCS for the Bay Area, 2017-2040 (Plan Bay Area 2040) (MTC/ABAG 2017). The Plan Bay Area 2040 provides a long-range regional transportation plan and SCS for the nine-county Bay Area and is an update to the Plan Bay Area's (2013) integrated transportation and land use plan, building on earlier work to develop an efficient transportation network, provide more housing choices, and grow in a financially and environmentally responsible way.

- In May 2016, ACTC adopted the 2016 Alameda Countywide Transportation Plan (CTP) (ACTC 2016b). The CTP is a long-range policy document that guides decisions and articulates the vision for Alameda County's transportation system over a 25-year planning horizon. It lays the groundwork for an investment program that is efficient and productive. The plan serves as Alameda County's input to the Regional Transportation Plan. The 2016 CTP update informed MTC's Regional Transportation Plan (Plan Bay Area 2040) update. The Alameda CTP is planned to be updated in 2020.

LOCAL

- In April 2019, the City and the Port approved the West Oakland Truck Management Plan (TMP) (City of Oakland 2019). The West Oakland TMP was prepared to comply with the requirements of Mitigation Measure 4.3-7 of the 2002 EIR as Addended and is an action-based plan designed to reduce the effects of haul trucks on local streets in West Oakland. When the TMP is implemented, the West Oakland community should experience fewer trucks driving or parking where they should not be, improved safety for people walking, biking, and driving in West Oakland, and an overall improvement in the quality of life for people living and working in West Oakland. Year 1 implementation started in July 2019 and includes developing and getting stakeholder feedback on specific recommended changes to Oakland Municipal Code regarding truck routes, truck prohibited streets, and truck parking.

- In July 2019, the City adopted "Let's Bike Oakland!" (City of Oakland 2018a), an update to the City's 2007 Bicycle Plan. The Let's Bike Oakland plan is organized around four goals: access; health and safety; affordability; and collaboration. Let's Bike Oakland! includes an action plan with performance measures for increasing the number of people who bike, decreasing bicyclist crashes, and improving the quality of bikeways.

- In 2017, the City completed Oakland Walks! (City of Oakland 2018b), an update to the City's 2002 Pedestrian Plan to reflect Oakland's changing conditions, needs, and priorities. Oakland Walks! incorporates up-to-date information on existing conditions, the City's pedestrian vision and goals; and outlines a five-year work plan of specific, high-priority and cost-effective improvements, programs, and policies.

UPDATED ENVIRONMENTAL SETTING

LOCAL ROADWAY SYSTEM

Since the 2012 Addendum, improvements have been completed along Maritime Street between 7th Street and West Grand Avenue per mitigation requirements identified in the 2012 Addendum and described below.

- A shoulder was with a minimum width of 8 feet was added on the west side of Maritime Street to accommodate queuing trucks and minimize intrusion onto the southbound travel lane. (*Note: Requirement of Mitigation Measure 3.16-5*.)

- A 9-foot-wide area was added along the entire west side of Maritime Street to accommodate a sidewalk and utilities (*Note: Requirement of Mitigation Measure 3.16-6*.)

- An 18-foot-wide area along the entire east side of Maritime Street to accommodate a Class 1 bicycle path and utilities (*Note: Requirement of Mitigation Measure 3.16-7*.)

Construction was also completed to improve Burma Road, serving the Gateway area north of the Project site.

UPDATED EXISTING TRAFFIC DATA

To update traffic information, morning (a.m.) and afternoon (p.m.) peak hour traffic data were collected at nine intersections near the Proposed Project site. All nine intersections evaluated are fully signalized intersections. Existing traffic counts and existing plus redevelopment traffic were included in the 2002 EIR as Addended for seven of the nine intersections; the corresponding intersection numbers per the 2012 Addendum are shown. The nine study area intersections are shown in **Figure 3.11-1**.

1. Maritime Street–Wake Avenue/I-80 West and I-580 East On-Ramp–Grand Avenue *(2012 Addendum Intersection #1)*
2. Maritime Street/Burma Road (*2012 Addendum Intersection #46*)
3. Maritime Street/17th Street (*not included in 2002 EIR as Addended*)
4. Maritime Street/14th Street (*2012 Addendum Intersection #47*)
5. Maritime Street/Navy Roadway (*projected traffic with Redevelopment Plan provided in 2002 EIR*)
6. Maritime Street/7th Street (*2012 Addendum Intersection #10 as Middle Harbor Road/7th Street*)
7. Frontage Road–I-80 East On-Ramp/Grand Avenue *(2012 Addendum Intersection #2)*
8. I-880 South On-Ramp/7th Street *(2012 Addendum Intersection #11)*
9. I-880 North Off-Ramp–Frontage Road/7th Street *(2012 Addendum Intersection #12)*

Figure 3.11-1. Study Area Intersections

The traffic counts were collected on Wednesday, October 23, 2019, by Counts Unlimited at the nine study area intersections. The existing intersection geometry and traffic volumes are provided in Appendix F, *Transportation Technical Appendix*.

The LOS definitions remain the same as those used in the 2002 EIR as Addended and the relationship between LOS and the delay for signalized intersections is provided in **Table 3.11-1** for reference.

Table 3.11-1. Intersection Level of Service Definition for Signalized Intersections

Level of Service	Description of Traffic Conditions	Average Delay Per Vehicle (Seconds)
A	Free flowing. Most vehicles do not have to stop.	≤10.0
B	Minimal delays. Some vehicles have to stop, although waits are not bothersome.	>10.0 and ≤20.0
C	Acceptable delays. Significant numbers of vehicles have to stop because of steady, high traffic volumes. Still, many pass without stopping.	>20.0 and ≤35.0
D	Tolerable delays. Many vehicles have to stop. Drivers are aware of heavier traffic. Cars may have to wait through more than one red light. Queues begin to form, often on more than one approach.	>35.0 and ≤55.0
E	Significant delays. Cars may have to wait through more than one red light. Long queues form, sometimes on several approaches	>55.0 and ≤80.0
F	Excessive delays. Intersection is jammed. Many cars have to wait through more than one red light, or more than 60 seconds. Traffic may back up into "up-stream" intersections.	>80.0

Source: Transportation Research Board, 2016. Highway Capacity Manual.

BICYCLE AND PEDESTRIAN FACILITIES

Construction of the multi-use path along the eastern side of Maritime Street was completed by the City in 2018; it is now part of the San Francisco Bay Trail. This bike path is located approximately 820 feet east of the Project site. Additionally, as documented in Oakland Walks!, the Port Maritime area is considered a car-dependent area and is considered a low priority for improvements due to the lack of pedestrian attractions. Gaps in pedestrian access identified along Maritime Street have since been addressed via new sidewalks or the new multi-use path. No high injury intersections or corridors were identified in Oakland Walks! near the Project site or within the Maritime area.

3.11.2 Summary of Prior Analysis

Impacts and mitigation measures in the 2002 EIR as Addended were reviewed for potential applicability to the Proposed Project. Impacts and the associated mitigation measures that may apply to the Proposed Project are summarized below.

The 2002 EIR as Addended concluded that the residual significant and unavoidable impact related to roadway segment operations on the MTS would remain significant:

- **Impact 4.3-2:** Redevelopment would cause some roadway segments on the MTS to operate at LOS F and increase the V/C ratio by more than three percent on segments that would operate at LOS F without redevelopment.

For the residual significant and unavoidable impact related to roadway segment operations on the MTS (Impact 4.3-2), the 2002 EIR as Addended identified the following SCA, which would reduce traffic demand on the MTS, but the impact would remain significant:

- **SCA TRANS-1: Parking and Transportation Demand Management:**

  For construction: Prior to issuance of first permit related to construction. For operation: Prior to issuance of a final building permit:

  The project sponsor shall pay for and submit for review and approval by the City a Transportation Demand Management (TDM) plan containing strategies to:

  a) Reduce the amount of traffic generated by new development and the expansion of existing development, pursuant to the City's police power and necessary in order to protect the public health, safety and welfare.

  b) Ensure that expected increases in traffic resulting from growth in employment and housing opportunities in the City will be adequately mitigated.

  c) Reduce drive-alone commute trips during peak traffic periods by using a combination of services, incentives, and facilities.

  d) Promote more efficient use of existing transportation facilities and ensure that new developments are designed in ways to maximize the potential for alternative transportation usage.

  e) Establish an ongoing monitoring and enforcement program to ensure that the desired alternative mode use percentages are achieved.

     Actions to consider include the following:

     i. Inclusion of additional long term and short term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan, and Bicycle Parking Ordinance, and shower and locker facilities in commercial developments that exceed the requirement.

     ii. Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping.

     iii. Installation of safety elements per the Pedestrian Master Plan (such as cross walk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials.

     iv. Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.

     v. Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.

     vi. Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as Alameda County Transit Authority (AC Transit) Easy Pass or a similar program through another transit agency).

vii. Employees or residents can be provided with a subsidy, determined by the project sponsor and subject to review by the City, if the employees or residents use transit or commute by other alternative modes.

viii. Provision of ongoing contribution to AC Transit service to the area between the development and nearest mass transit station. If that is not available, an ongoing contribution to an existing area shuttle service between the development and nearest mass transit station. The last option is establishment of a new shuttle service between the development and nearest mass transit station may be developed. The contribution required for the service (any option) will be based on the cost of the last option.

ix. Guaranteed ride home program for employees, either through 511.org or through separate program.

x. Pre-tax commuter benefits (commuter checks) for employees.

xi. Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants.

xii. On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.

xiii. Distribution of information concerning alternative transportation options.

xiv. Parking spaces sold/leased separately for residential units. Charge employees for parking or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.

xv. Parking management strategies; including attendant/valet parking and shared parking spaces.

xvi. Requiring tenants to provide opportunities and the ability to work off-site.

xvii. Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite.

xviii. Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.

The project sponsor shall submit an annual compliance report for review and approval by the City. This report will be reviewed either by City staff (or a peer review consultant, chosen by the City and paid for by the project sponsor). If timely reports are not submitted, the reports indicate a failure to achieve the stated policy goals, o the required alternative mode split is still not achieved, staff will work with the project sponsor to find ways to meet their commitments and achieve trip reduction goals. If the issues cannot be resolved, the matter may be referred to the Planning Commission for resolution. Project sponsors shall be required, as a condition of

approval, to reimburse the City for costs incurred in maintaining and enforcing the trip reduction program for the approved project.

The 2002 EIR as Addended concluded that potentially significant impacts related to intersection LOS would be reduced to less-than-significant levels:

- **Impact 4.3-1:** Redevelopment could cause the LOS to degrade to worse than LOS D at three intersections located outside the Downtown area:
  - West Grand Avenue/Maritime Street (Note: Study Intersection #1; 2012 Addendum Intersection #1)
  - West Grand Avenue/I-880 Frontage Road (Note: Study Intersection #7; 2012 Addendum Intersection #2)
  - 7th Street/Maritime Street (Note: Study Intersection #6; 2012 Addendum Intersection #10)

For the potentially significant impact related to intersection LOS (Impact 4.3-1), the 2002 EIR identified mitigation measures to reduce impacts to a less-than-significant level. The 2012 Addendum concluded that impacts to these intersections were less than significant and presented the following as recommended measures:

- **Recommended Measure: West Grand Avenue/Maritime Street (Study Intersection #1; 2012 Addendum Intersection #1).** Extend the northbound left-turn storage length to 475 feet while providing a minimum of 100 feet storage length for the southbound left turn movement at the Burma Road and Maritime Street intersection. (*Note: This measure has been completed*.)
- **Recommended Measure: West Grand Avenue/I-880 Frontage Road (Study Intersection #7; 2012 Addendum Intersection #2).** Extend the westbound left-turn storage length to 320 feet by removing a portion of the existing center median.
- **Mitigation Measure 4.3-3: 7th Street/Maritime Street (Study Intersection #6; 2012 Addendum Intersection #10**). As part of the design for the realignment of Maritime Street, the Port shall also provide modifications to the 7th Street/Maritime Street intersection. (*Note: Maritime Street was not realigned per the Maritime Street Addendum.)*

The 2002 EIR as Addended concluded that potentially significant impacts related to traffic hazards; emergency access; policies, plans and programs supporting alternative transportation; parking supply; and activities during construction phase would be reduced to less than-significant levels:

- **Impact 4.3-3:** Redevelopment could result in traffic hazards to motor vehicles, bicycles, or pedestrians due to inadequate design features or incompatible uses.
- **Impact 4.3-5:** Redevelopment could fundamentally conflict with adopted policies, plans, or program supporting alternative transportation.
- **Impact 4.3-6:** Redevelopment could result in an inadequate parking supply at the Gateway development area, the 16th/Wood sub district, or for trucks serving the Port.

- **Impact 4.3-11:** Remediation, demolition/deconstruction, and construction activities within the redevelopment project area would use a significant number of trucks and could cause significant circulation impacts on the street system.

For the potentially significant impacts related to traffic hazards (Impact 4.3-3); policies, plans and programs supporting alternative transportation (Impact 4.3-5); parking supply (Impact 4.3-6); and activities during construction phase (Impact 4.3-11), the 2002 EIR as Addended identified the following mitigation measures and SCA to reduce the impacts to less-than-significant levels:

- **Mitigation Measure 4.3-5:** Redevelopment elements shall be designed in accordance with standard design practice and shall be subject to review and approval of the City or Port design engineer.

- **Mitigation Measure 4.3-7:** The City and the Port shall continue to work together and shall create a TMP designed to reduce the effects of transport trucks on local streets. The City and Port shall fund on a fair share basis implementation of this plan. (*Note: See above updated Local Regulatory Setting, regarding the West Oakland Truck Management Plan.)*

- **Mitigation Measure 3.16-5:** The City shall provide a shoulder with a minimum width of 8 feet on the west side of Maritime Street to accommodate queuing trucks and minimize intrusion onto the southbound travel lane. (*Note: This mitigation measure has been completed.)*

- **Mitigation Measure 3.16-6:** The City shall provide a 9-foot-wide area along the entire west side of Maritime Street in this area to accommodate a sidewalk and utilities; exact dimensions of these elements will be determined by the City's Transportation and Infrastructure Divisions during the Planned Unit Development (PUD) process. (*Note: This mitigation measure has been completed.)*

- **Mitigation Measure 3.16-7:** The City shall provide an 18-foot-wide area along the entire east side of Maritime Street in this area to accommodate a Class 1 bicycle path and utilities; exact dimensions of these elements will be determined by the City's Transportation and Infrastructure Divisions during the PUD process. (*Note: This mitigation measure has been completed.)*

- **Mitigation Measure 4.3-10:** The number of parking spaces provided in the project area shall comply with City code or Port requirements and/or with recommendations of a developer funded parking demand analysis.

- **Mitigation Measure 4.3-11:** During both construction and operation, the Port shall provide truck parking within the Port development area or Maritime sub-district, at a reasonable cost to truck operators and provide advance information to operators where the parking is located.

- **Mitigation Measure 4.3-13:** Prior to commencing hazardous materials or hazardous waste remediation, demolition, or construction activities, a Traffic Control Plan (TCP) shall be implemented to control peak hour trips to the extent feasible, assure the safety on the street system and assure that transportation activities are protective of human health, safety, and the environment.

- **SCA TRANS-2: Construction Traffic and Parking:**

  Prior to the issuance of a demolition, grading or building permit:

  The project sponsor and construction contractor shall meet with appropriate City agencies to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project ~~(see also SCA TRANS-1, especially "h")~~ and other nearby projects that could be simultaneously under construction. The project sponsor shall develop a construction management plan. The plan shall be submitted to EBMUD ~~and Caltrans~~ for their review and comment ten (10) business days before submittal to the City. The project sponsor shall consider in good faith such comments and revise the plan as appropriate. The revised plan shall be submitted for review and approval by the Planning and Zoning Division, the Building Services Division, and the Transportation Service Division. The plan shall include at least the following items and requirements:

  a) A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.

  b) Notification procedures for adjacent project sponsors and public safety personnel regarding when major deliveries, detours, and lane closures will occur.

  c) Location of construction staging areas for materials, equipment, and vehicles at an approved location.

  d) A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an on-site complaint manager. The manager shall determine the cause of the complaints and shall take prompt action to correct the problem. Planning and Zoning shall be informed who the Manager is prior to the issuance of the first permit issued by Building Services.

  e) Provision for accommodation of pedestrian flow.

  f) Provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on-street spaces ~~(see also SCA TRANS-1, especially "h")~~.

  g) Any damage to the street caused by heavy equipment, or as a result of this construction, shall be repaired, at the applicant's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety shall be repaired immediately. The street shall be restored to its condition prior to the new construction as established by the City Building Inspector and/or photo documentation, at the applicant's expense, before the issuance of a Certificate of Occupancy.

  h) Any heavy equipment brought to the construction site shall be transported by truck, where feasible.

i) No materials or equipment shall be stored on the traveled roadway at any time.

j) Prior to construction, a portable toilet facility and a debris box shall be installed on the site, and properly maintained through project completion.

k) All equipment shall be equipped with mufflers.

l) Prior to the end of each work day during construction, the contractor or contractors shall pick up and properly dispose of all litter resulting from or related to the project, whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors.

Specifically, to further implement SCA TRANS-2, a traffic construction management analysis was performed which recommended certain improvements to the Adeline/5th Street and Adeline/3rd Street intersections, which is discussed under construction impacts of this section.

3.11.3 Impacts and Mitigation Measures

The Proposed Project was evaluated against applicable significance criteria from the 2002 EIR as Addended. The Proposed Project would have a significant impact on the environment if it would:

- Cause an increase in traffic which is substantial in relation to the existing or future baseline traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the V/C ratio on roads, or congestion at intersections), or change the condition of an existing street (i.e., street closures, changing direction of travel) in a manner that would substantially impact access or traffic load and capacity of the street system. Specifically, redevelopment would have a significant effect on the environment if it would:

  i. Cause the existing or future baseline LOS to degrade to worse than LOS D (i.e., E) at a signalized intersection which is located outside the Downtown area;

  ii. At a signalized intersection for all areas where the existing or future baseline LOS is F, cause:

    a. The total intersection average vehicle delay to increase by two (2) or more seconds,

    b. An increase in average delay for any of the critical movements of four (4) seconds or more, or

    c. The “V/C” ratio exceeds three (3) percent (but only if the delay values cannot be measured accurately);

- Cause a roadway segment on the MTS to operate at LOS F or increase the V/C ratio by more than three (3) percent for a roadway segment that would operate at LOS F without redevelopment;

- Substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature that does not comply with Caltrans design standards (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment or large trucks on neighborhood-serving streets); or

- Result in inadequate parking capacity or increase the number and incidence of large vehicles parking within surrounding communities or on streets not designated for such uses. Inadequate parking capacity would result in a parking demand (both project-generated and project-displaced) that would not be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the Project site. Project- displaced parking results from the project's removal of standard on-street parking and legally required off-street parking (non-public parking which is legally required).

IMPACT ANALYSIS METHODOLOGY

TRIP GENERATION DURING OPERATION

As shown in **Table 3.11-2** below, vehicle trips were estimated for Proposed Project operations. Based on the Applicant's schedule for employee shifts, all inbound and outbound employee trips would occur outside the a.m. and p.m. peak hours.

During operations, up to 375 haul trucks and 45 staff in a 24-hour period would generate an average daily traffic (ADT) volume of 1,590 trips. The truck trips would be spread out over the day, with 64 trips in both the a.m. peak hour and p.m. peak hour (32 inbound and 32 outbound). Due to shift schedules, staff are not expected to arrive or depart during peak traffic hours. The trip generation counts each truck trip as two passenger car trips to account for trucks having a greater effect on traffic operations due to slower acceleration and deceleration times.

Table 3.11-2. Proposed Project Trip Generation During Operations

Type	Maximum Daily Vehicles Quantity	Model ADT	Trip Generation - AM Peak Hour In	Trip Generation - AM Peak Hour Out	Trip Generation - AM Peak Hour Total	Trip Generation - PM Peak Hour In	Trip Generation - PM Peak Hour Out	Trip Generation - PM Peak Hour Total
Staff[1] Passenger Auto	45	90	0	0	0	0	0	0
Haul (Large) Truck	375	1,500	32	32	64	32	32	64
	Total	1,590	32	32	64	32	32	64

ADT = average daily traffic.

For traffic modeling purposes, the site is considered to be open from 4:00 a.m. to 8:00 p.m. (16 hours).

1. The site would have 2-3 daily shifts each with 15 staff (up to 45 total staff). The 15 staff are based on 8 ERA employees, up to 3 additional ERA employees, and 4 longshoremen. Each passenger vehicle makes one trip inbound and one trip outbound.

PROJECT DISTRIBUTION AND ASSIGNMENT

The directions of approach to, and departure from, the Proposed Project site are based on the Bay Area locations of facilities where aggregate was delivered from the Applicant's Richmond site during the 2018 calendar year. These facilities are located in Antioch, Berkeley, Concord, Oakland, Pleasanton, Union

City, Martinez, Hayward, San Rafael, and Richmond (see Figure 2-4). Based on access to these facilities from the Proposed Project site, the trip distribution characteristics are as follows:

- 16 percent of Project trips would travel locally via Grand Avenue (approximately 15 percent to the US Concrete Plant located on Peralta in West Oakland and another 1 percent to other destinations).
- 84 percent of Project trips would travel regionally:
  - 36 percent of Project trips to the north via the I-80 East Ramp on Grand Avenue
  - 42 percent or Project trips to the south via the I-880 South Ramp on 7th Street
  - 6 percent of Project trips to the east and west via the I-80 West and I-580 East Ramps on Maritime Street

The Project trips have been added to the existing traffic volumes to represent "Existing Plus Project" conditions for a conservative estimate of traffic impacts; the model includes trucks currently parking at or using the Project site.

Intersection Level of Service Methodology

Intersections were evaluated using the Highway Capacity Manual (HCM), 6th Edition, (Transportation Research Board 2016) methodology. HCM analysis of all study area intersections used Synchro (version 10). The study area intersection LOS analysis was conducted for the weekday a.m. and p.m. peak hours. The HCM worksheets are provided in Appendix F.

Proposed Project Freeway Trips

Table 3.11-3 below summarizes the number of peak hour trips added by the Proposed Project to the freeway segments near the Project site based on the trip generation and trip distribution outlined in Table 3.11-2 above. Both a.m. and p.m. peak hour trips are the same. The Proposed Project would add between 2 and 13 trips per hour per direction to the freeway segments.

Trucks traveling to or from the north would utilize West Grand Avenue to access Maritime Street, and trucks traveling to or from the south would utilize 7th Street to access I-880 (see Figure 2-11). This pattern would divert trucks away from the stretch of I-880 between 7th Street and West Grand Avenue and the associated Frontage Road. The Port would place signage at appropriate locations along the truck routes to indicate the required routes for aggregate trucks, and the Applicant would impose a three strikes rule to ban truck drivers from the Oakland Terminal if they do not adhere to the route restrictions.

Table 3.11-3. Proposed Project Freeway Trips

Freeway Segment	Direction	Operations (Peak Hour Project Trips)
I-80, at Bay Bridge	Eastbound	2
I-80, at Bay Bridge	Westbound	2
I-80/580, north of the I-880/I-580 split	Eastbound	8
I-80/580, north of the I-880/I-580 split	Westbound	8
I-580, east the I-880/I-580 split	Eastbound	4
I-580, east the I-880/I-580 split	Westbound	4
I-880, south of 7th Street	Northbound	13
I-880, south of 7th Street	Southbound	13

Note: Local trips onto West Grand Avenue are not included in these calculations.

EXISTING PLUS PROJECT CONDITIONS

Existing traffic volumes were collected by Counts Unlimited on October 23, 2019, for the study area intersections. The existing traffic counts and peak hour intersection volumes are provided in Appendix F. Due to the limited number of trips added to freeway segments, freeway segment volumes were not collected for this Project. **Table 3.11-4** summarizes the results of the Existing and Existing Plus Project peak-hour LOS for the study area intersections. Study area intersections that would operate below LOS D are shown in bold.

Table 3.11-4. Intersection Level of Service—Existing and Existing Plus Project Conditions

2012*	2020*	Intersection	Peak Hour	Existing (2019) Delay	Existing (2019) LOS	Delay**	LOS**	Delta Delay (seconds)**
1	1	Maritime St–Wake Ave/I-80 West and I-580 East Ramps–Grand Ave	AM	25.6	C	26.4	C	0.8
1	1	Maritime St–Wake Ave/I-80 West and I-580 East Ramps–Grand Ave	PM	26.1	C	27.8	C	1.7
46	2	Maritime St/Burma Rd	AM	10.8	B	10.9	B	0.1
46	2	Maritime St/Burma Rd	PM	20.2	C	19.8	B	-0.4
NA	3	Maritime St/17th St	AM	15.4	B	22.4	C	7.0
NA	**3**	**Maritime St/17th St**	**PM**	47.7	D	**56.6**	**E**	8.9
47	4	Maritime St/14th St	AM	11.9	B	11.9	B	0.0
47	4	Maritime St/14th St	PM	34.7	C	34.5	C	-0.2
NA	5	Maritime St/Navy Roadway	AM	3.9	A	4.3	A	0.4
NA	5	Maritime St/Navy Roadway	PM	3.3	A	3.3	A	0.0
10	**6**	**Maritime St/7th St**	**AM**	**83.8**	**F**	**83.7**	**F**	-0.1
10	6	Maritime St/7th St	PM	41.2	D	43.6	D	2.4
2	7	Frontage Rd–I-80 E On-Ramp/Grand Ave	AM	35.8	D	37.0	D	1.2
2	7	Frontage Rd–I-80 E On-Ramp/Grand Ave	PM	38.0	D	38.7	D	0.7
11	8	I-880 SB On-Ramp/7th St	AM	3.3	A	3.3	A	0.0
11	8	I-880 SB On-Ramp/7th St	PM	3.8	A	3.8	A	0.0
12	9	I-880 NB Off-Ramp–Frontage Rd/7th St	AM	30.3	C	30.8	C	0.5
12	9	I-880 NB Off-Ramp–Frontage Rd/7th St	PM	36.2	D	41.6	D	5.4

* Intersection Number

** Existing Plus Project (Typical Operations)

LOS based on HCM, 6th Edition; definitions for LOS have remained the same since the 2012 Addendum. SB = southbound, NB = northbound, NA = not applicable

Note: **Bold** text denotes potentially significant impact for an intersection with a LOS at less than LOS D.

TRIP GENERATION DURING CONSTRUCTION

As shown in **Table 3.11-5**, vehicle trips were estimated for construction based on a focused 3-month period of the construction schedule during which foundation piles would be constructed and concrete forming and pouring would take place. The remaining 6-9 months of construction would generate a smaller number of trips. For the focused period, the volumes of export and import material, the amount of steel equipment to be brought to the Project site, and the anticipated number of construction workers to be on-site were estimated. The number of truck trips was based on the estimated volume of export and import of material and import of steel equipment.

During construction, 8 trucks and 15 construction worker vehicles would each make an inbound trip and an outbound trip and would result in a total ADT volume of 62.

Table 3.11-5. Proposed Project Trip Generation During Construction

Maximum Daily Vehicles Description	Maximum Daily Vehicles Quantity	Maximum Daily Vehicles Type	Vehicle Trip Generation (ADT)
Construction Workers	15	Passenger	30
Truck[1]	8	Large Truck	32
		Total	62

1. For purposes of traffic modeling, each truck is counted as two passenger cars.

ADT = average daily traffic

RAIL EVALUATION

The Proposed Project's construction aggregates would not be delivered or distributed by rail. The construction aggregates are sourced on Vancouver Island, British Columbia and its current existing delivery method via OGV would continue with the Proposed Project. In addition, the material is distributed to many local sites that would preclude the use of rail for distribution due to both the number of end-user facilities and the lack of rail service at the end-user facilities.

IMPACTS

Impact TRANS-1: Would the Proposed Project cause an increase in traffic which is substantial in relation to the existing or future baseline traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections), or change the condition of an existing street (i.e., street closures, changing direction of travel) in a manner that would substantially impact access or traffic load and capacity of the street system?

i. Specifically, would the project cause the existing or future baseline LOS to degrade to worse than LOS D (i.e., E) at a signalized intersection which is located outside the Downtown area?

The 2002 EIR as Addended concluded that Redevelopment could cause the LOS to degrade to worse than LOS D at three intersections located outside the Downtown area (Impact 4.3-1):

- West Grand Avenue/Maritime Street (Study Intersection #1; 2012 Addendum Intersection #1)
- West Grand Avenue/I-880 Frontage Road (Study Intersection #7; 2012 Addendum Intersection #2)
- 7th Street/Maritime Street (Study Intersection #6; 2012 Addendum Intersection #10 [referred to as the intersection at Middle Harbor Road and 7th Street])

Construction traffic associated with the Proposed Project would be temporary and would not affect long-term LOS. As shown in Table 3.11-5, the small number of trips expected during construction

represents an inconsequential proportion of daily traffic volume on roadway segments in the Proposed Project vicinity and would thus have less-than-significant impacts on LOS during construction.

Implementation of the Proposed Project would cause the LOS at the study signalized intersection of Maritime Street and 17th Street (Study Intersection #3; not analyzed in the 2002 EIR as Addended) to degrade from LOS D to LOS E under Existing Plus Project conditions during the p.m. peak hour. The primary movements that degrade this intersection are the Maritime Street northbound left turn lane and Maritime Street southbound left turn lane. This is a new potentially significant impact not previously identified in the 2002 EIR as Addended.

The proposed new **Mitigation Measure ERA TRANS-1** would be required such that the intersection would operate at LOS D or better. With implementation of Mitigation Measure ERA TRANS-1, the Maritime Street/17th Street intersection would operate at LOS C during the p.m. peak hour. Modelling results with signal optimization are provided in Appendix F.

Mitigation Measure ERA TRANS-1: Optimize Signal Timing at Maritime Street/17th Street.

1. Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the p.m. peak hour and coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

2. To implement this measure, the Applicant shall submit the plans, specifications, and estimates (PS&E) to modify the intersection to City's Transportation Engineering Division ~~and Caltrans~~ for review and approval. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and Americans with Disabilities Act (ADA) standards (according to Federal and State Access Board guidelines) at the time of construction.

Impacts would be consistent with the level of significance determined for impacts to LOS at signalized intersections in the 2002 EIR as Addended. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended, which was **less than significant with mitigation.**

ii. At a signalized intersection for all areas where the existing or future baseline LOS is F, cause:

A. The total intersection average vehicle delay to increase by two (2) or more seconds?

B. An increase in average delay for any of the critical movements of four (4) seconds or more?

C. Or the volume-to-capacity ("V/C") ratio exceeds three (3) percent (but only if the delay values cannot be measured accurately)?

Construction traffic associated with the Proposed Project, as shown in Table 3.11-5, would be temporary and would not affect long-term LOS.

As shown in Table 3.11-4 above, the 7th Street/Maritime Street intersection currently operates at LOS F during the a.m. peak hour and would continue to operate at LOS F under Existing plus Project conditions. The Proposed Project would not (a) increase the total intersection average vehicle delay by two or more seconds, (b) increase average delay for any of the critical movements by four or more seconds, or (c) increase the intersection V/C ratio by three percent or more. In addition, the 2002 EIR as Addended includes the 7th Street Grade Separation Project, which would improve congestion at this intersection. ACTC is leading the funding and implementation of the 7th Street Grade Separation Project-, which is expected to be under construction within the next few years.

No mitigation measures are necessary. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

Impact TRANS-2: Cause a roadway segment on the Metropolitan Transportation System (MTS) to operate at LOS F or increase the V/C ratio by more than three (3) percent for a roadway segment that would operate at LOS F without redevelopment?

The 2002 EIR as Addended concluded that Redevelopment would cause some roadway segments on the MTS to operate at LOS F and increase the V/C ratio by more than three percent on segments that would operate at LOS F without redevelopment (Impact 4.3-2), resulting in residual significant and unavoidable impacts. Construction traffic associated with the Proposed Project would be temporary and would not affect long-term V/C ratio. During operation, the Proposed Project would add between 2 and 13 trips per hour per direction to the associated freeway segments as shown in Table 3.11-3. The threshold for a significant impact on freeway segments includes increasing the V/C ratio by 0.03, which translates to a project adding 180 peak hour trips per direction to a three-lane freeway segment. Considering the small amount of traffic added by the Project to each freeway segment, the Proposed Project would not result in a significant impact on freeways. No mitigation measures would be necessary. The small amount of Project trips would not increase the impact to congested freeway segments identified in the 2002 EIR as Addended. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **significant and unavoidable** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

Impact TRANS-3: Substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature that does not comply with Caltrans design standards (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment or large trucks on neighborhood-serving streets)?

The 2002 EIR as Addended concluded that Redevelopment could result in traffic hazards to motor vehicles, bicycle, or pedestrians due to inadequate design features or incompatible uses (Impact 4.3-3). The Proposed Project would not introduce unsafe design features or incompatible uses into the area and would be consistent with other Port maritime uses. During construction, the Proposed Project would not increase hazards to bicycles or pedestrians, who can use the multi-use path located approximately 820 feet east of the Project Site on the east side of Maritime Street. Due to the Project's location within the Port Maritime area 500 feet or more from major roadways, construction activities would be unlikely to increase hazards to motor vehicles. Finally, implementation of SCA TRANS-2: Construction Traffic and Parking would be required and would include measures such as scheduling, traffic controls, and signage to maintain safety during construction. Construction vehicles would access the Port using the same Truck Routes and roadways as Port drayage trucks.

During operation, access to the Proposed Project would be provided at the existing driveway at the 17th Street/Maritime Street intersection, which is signalized. The existing driveway is already built to accommodate all vehicle types (including trucks) and provides two-lane inbound access and one-lane outbound access. Although there are not designated left or right turn lanes out of the Project site, there is adequate sight distance (without any sight obstructions) currently provided at the driveway.

The Proposed Project includes a truck staging area that can accommodate up to approximately 15 trucks; an outer lane of the on-site truck circulation route that could accommodate up to approximately 33 trucks; and the primary load lane which can accommodate 12 trucks. Between the Project site and the driveway at 17th Street, approximately 10 trucks could also stage. Based on the distance between the Project site and Maritime Street and the on-site available space for trucks, approximately 70 trucks could be accommodated prior to any truck queuing along Maritime Street. In the event that queuing is needed along Maritime Street, the street itself is comprised of two through lanes and a shoulder that would allow a vehicle bypass.

The Proposed Project would not substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are necessary.

Impact TRANS-4: Result in inadequate parking capacity or increase the number and incidence of large vehicles parking within surrounding communities or on streets not designated for such uses? Inadequate parking capacity would result in a parking demand (both project-generated and project-displaced) that would not be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the Project site. (Project-displaced parking results from the project's removal of standard on-street parking and legally required off-street parking [non-public parking which is legally required]).

The 2002 EIR as Addended concluded that Redevelopment construction activities would use a significant number of trucks and could cause significant circulation impacts on the street system (Impact 4.3-11). The Proposed Project would eliminate approximately 18 acres of existing AMS, including overnight truck parking and shipping container/chassis storage and staging to support Port maritime activities, that currently occupy the site. The Tioga Group (2020) recently completed the *2019-2050 Bay Area Seaport Forecast*, which concluded that approximately 30 acres of overnight truck tractor parking and container/chassis staging would be required through 2050 to meet the needs of any growth scenario. The 2001 amendment to the BCDC Seaport Plan required that 30 acres of truck-related ancillary services, including overnight truck tractor parking and container/chassis staging, be provided collectively by the Port and the City (15 acres each), which would meet the need identified in the Tioga Group study. The Port currently has 40 acres for public truck parking including 15 acres at Roundhouse (an area formerly occupied by Union Pacific located south of Adeline Street, east of the Matson Terminal, and west of Schnitzer Steel) and 25 acres at Howard Terminal.

During construction, the Proposed Project would not result in inadequate parking or increase the number and incidence of large vehicles parking within the surrounding community. The 31 vehicles used during construction (e.g., workers and construction vehicles) would represent a small proportion of daily traffic volume on roadway segments in the Proposed Project vicinity. Furthermore, these vehicles would be accommodated on-site or between the driveway of the Project site and Maritime street during construction. As such, these vehicles would neither displace parking nor utilize space within communities where such uses are not designated. Additionally, implementation of SCA TRANS-2:

Construction Traffic and Parking would be required and would include measures such as designated construction staging and parking areas. No significant impacts from parking of construction equipment and construction worker vehicles would occur.

The Proposed Project would not result in inadequate parking capacity or increase the number and incidence of large vehicles parking within surrounding communities or on streets not designated for such uses. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are necessary.

Table 3.11-6 summarizes the impacts from the 2002 EIR as Addended that apply to the Proposed Project; indicates SCA that would apply to the Proposed Project; and indicates whether a new significant impact or a substantial increase in an identified impact would occur. No new significant impacts related to traffic not previously disclosed in the 2002 EIR as Addended would occur with implementation of the Proposed Project. However, a substantial increase in the severity of Impact 4.3-1 would occur.

Table 3.11-6. Impacts Related to Transportation

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact TRANS-1: Would the Proposed Project cause an increase in traffic which is substantial in relation to the existing or future baseline traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections), or change the condition of an existing street (i.e., street closures, changing direction of travel) in a manner that would substantially impact access or traffic load and capacity of the street system? i. Specifically, would the project cause the existing or future baseline level of service (LOS) to degrade to worse than LOS D (i.e., E) at a signalized intersection which is located outside the Downtown area? ii. At a signalized intersection for all areas where the existing or future baseline LOS is F, cause: a. The total intersection average vehicle delay to increase by two (2) or more seconds?	Mitigation Measure ERA TRANS-1 (NEW)	Proposed Project would not substantially affect the LOS at signalized intersections in the vicinity of the site	Less than significant with mitigation	No

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
b. An increase in average delay for any of the critical movements of four (4) seconds or more? c. Or the volume-to-capacity ("V/C") ratio exceeds three (3) percent (but only if the delay values cannot be measured accurately)?				
Impact TRANS-2: Would the Proposed Project cause a roadway segment on the Metropolitan Transportation System (MTS) to operate at LOS F or increase the V/C ratio by more than three (3) percent for a roadway segment that would operate at LOS F without redevelopment?	None	Proposed Project would not substantially degrade the LOS of congested freeway segments	Significant and unavoidable	No
Impact TRANS-3: Would the Proposed Project substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature that does not comply with California Department of Transportation (Caltrans) design standards (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment or large trucks on neighborhood-serving streets)?	SCA TRANS-2	Proposed Project would not substantially increase traffic hazards	Less than significant	No

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact TRANS-4: Would the Proposed Project result in inadequate parking capacity or increase the number and incidence of large vehicles parking within surrounding communities or on streets not designated for such uses? Inadequate parking capacity would result in a parking demand (both project-generated and project-displaced) that would not be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the Project site (Project- displaced parking results from the project's removal of standard on-street parking and legally required off-street parking [non-public parking which is legally required])?	SCA TRANS-2	Proposed Project would not substantially decrease parking	Less than significant	No

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3.12 UTILITIES, ENERGY, AND SERVICE SYSTEMS

This section identifies potential utilities and service systems impacts of the Proposed Project; evaluates whether the Proposed Project would result in new significant utilities and service systems impacts not identified in the 2002 EIR as Addended for the OAB Area Redevelopment Plan; or whether the Proposed Project would result in a substantial increase in the severity of the previously identified significant impacts due to Project changes, changes in setting, or new information. Previously identified mitigation measures and SCA from the 2002 EIR as Addended that would apply to the Proposed Project are identified.

3.12.1 Update to Regulatory and Environmental Setting

UPDATED REGULATORY SETTING

Regulations relevant to utilities, energy, and service systems that have occurred since the 2012 Addendum include the following:

- In 2016, EBMUD released its 2015 Urban Water Management Plan (UWMP) under compliance with California Water Code §§ 10610 et seq. The UWMP provides an assessment of EBMUD's water supply and demand, an overview of the recycled water and conservation programs, and compliance with state regulations.

- Refer to Section 3.~~5~~6, "Greenhouse Gas Emissions," for a further discussion of energy-related regulations and policies.

ENVIRONMENTAL SETTING

Existing conditions relating to utilities, energy, and service systems have not changed substantially from the regional and local setting identified in the 2002 EIR as Addended.

The Project site includes an array of existing water supply, stormwater, electric, and gas service lines. As described in Section 3.~~7~~8, "Hydrology and Water Quality," stormwater runoff drains into catch basins located on the western and northern perimeters of the Project site, as well as throughout the site's interior. Four rows of storm drainage pipes located parallel to Berths 20 and 21 convey water towards five storm drain outfalls at Berths 20 and 21 located on the site's northern perimeter, which empty directly into the Harbor.

Two potable water supply lines run across the northern portion of the Project site (sized eight and six inches, respectively) and one recycled water supply line runs along Maritime Street east of the Project site and would require a connection at the northeast portion of the site near 17th Street. ~~while o~~One fire service line runs across the southern portion of the site and another runs north-south, bisecting the site's interior. Additional fire service lines run parallel to Berth 21 along the site's western perimeter. Two electrical lines run across the central and southern portions of the site, and one electrical line runs north-south parallel to the fire service line. A gas line runs across the eastern portion of the site but does not reach the site's interior or perimeter areas. An existing sanitary sewer line runs parallel to the site's northern perimeter in the vicinity of the proposed scale house and truck tire wash system(s).

3.12.2 Summary of Prior Analysis

Impacts and mitigation measures in the 2002 EIR as Addended were reviewed for potential applicability to the Proposed Project. Impacts and the associated mitigation measures that may apply to the Proposed Project are summarized below.

The 2002 EIR as Addended concluded that the following potentially significant impacts related to utilities, energy, and service systems from the OAB Area Redevelopment Plan would be reduced to less-than-significant levels:

- **Impact 4.9-8:** Redevelopment would increase potable water demand.
- **Impact 4.9-10:** Redevelopment would increase the quantity of solid waste, and demand for solid waste services.
- **Impact 4.9-12:** Both construction/remediation vehicles and increased operations vehicle activity would accelerate or advance deterioration of local roadways and the timing and extent of roadway maintenance/repair.

For the potentially significant impact related to potable water demand (Impact 4.9-8), the 2002 EIR as Addended identified mitigation measures to reduce impacts to a less-than-significant level; however, none of these measures would be applicable to the Proposed Project because (a) landscaping is not proposed; (b) the scale of building on the site would be less than 10,000 square feet; and (c) there would be no need for recycled water.

For the potentially significant impact related to the increased quantity of solid waste and increased demand for solid waste services, the 2002 EIR as Addended identified the following mitigation measures and SCA to reduce impacts to a less-than-significant level:

- **Mitigation Measure 4.9-7:** To the maximum extent feasible, the City and Port shall jointly participate in a deconstruction program to capture materials and recycle them into the construction market.
- **Mitigation Measure 4.9-8:** Concrete and asphalt removed during demolition/ construction shall be crushed on-site or at a near-site location and reused in redevelopment or recycled to the construction market.
- **SCA UTL-2: Waste Reduction and Recycling:**

  The project applicant will submit a Construction & Demolition WRRP and Operational Diversion Plan (ODP) for review and approval by the Public Works Agency.

  Prior to issuance of demolition, grading, or building permit:

  Chapter 15.34 of the Oakland Municipal Code outlines requirements for reducing waste and optimizing construction and demolition (C&D) recycling. Affected projects include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3), and all demolition (including soft demo). The WRRP must specify the methods by which the development will divert C&D debris waste generated by the proposed

project from landfill disposal in accordance with current City requirements. Current standards, frequently asked questions (FAQs), and forms are available at www2.oaklandnet.com/Government/o/PWA/o/FE/s/GAR/OAK024368 or in the Green Building Resource Center. After approval of the plan, the project applicant shall implement the plan.

Ongoing:

The ODP will identify how the project complies with the Recycling Space Allocation Ordinance, (Chapter 17.118 of the Oakland Municipal Code), including capacity calculations, and specify the methods by which the development will meet the current diversion of solid waste generated by operation of the proposed project from landfill disposal in accordance with current City requirements. The proposed program shall be in implemented and maintained for the duration of the proposed activity or facility. Changes to the plan may be re-submitted to the Environmental Services Division of the Public Works Agency for review and approval. Any incentive programs shall remain fully operational as long as residents and businesses exist at the project site.

For the potentially significant impact related to deterioration of local roadways (Impact 4.9-12), the 2002 EIR as Addended identified the following mitigation measure to reduce impacts to a less-than-significant level:

- **Mitigation Measure 4.9-10:** The Port and City shall work cooperatively to develop an ongoing joint program to identify and evaluate impacted local roadways and identify required maintenance/repair activities. The agencies will fund needed repairs and maintenance on a fair-share basis. (Note: The City's Community Facilities District Fee is the mechanism by which road maintenance would be paid for. The mitigation measure is no longer required.)

The 2002 EIR as Addended concluded that the OAB Area Redevelopment Plan would have less-than-significant impacts on stormwater facilities, wastewater conveyance and energy demand:

- **Impact 4.9-7:** The new storm sewer system for the 16th/Wood sub-district would expand existing facilities. (*Note: The Proposed Project does not fall within this sub-district; however, storm sewer system infrastructure would be expanded and/or replaced at the Project site*.)

- **Impact 4.9-9:** Redevelopment would increase sewer flows to the EBMUD transport and treatment system.

- **Impact 4.9-11:** Redevelopment could increase demand for energy.

The Proposed Project differs from the OAB Area Redevelopment Plan by changing a portion of a terminal designated for container cargo to bulk construction aggregates. The different structures associated with the change in use would result in new construction that would have the potential to increase demand for utility and service systems. Potential impacts associated with the Proposed Project are discussed in more detail below.

3.12.3 Impacts and Mitigation Measures

The Proposed Project was evaluated against applicable significance criteria from the 2002 EIR as Addended. The Proposed Project would have a significant impact on the environment if it would:

- Require or result in construction of new stormwater drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Exceed water supplies available to serve the redevelopment program from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Result in a determination by the wastewater treatment provider that serves or may serve the redevelopment program that it does not have adequate capacity to serve the redevelopment program's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Be served by a landfill with insufficient permitted capacity to accommodate the redevelopment program's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Violate applicable federal, state, or local statutes and regulations related to solid waste;
- Would the project violate applicable federal, state, and local statutes and regulations relating to energy standards;
- Result in a determination by the energy provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects; or
- Accelerate or advance the timing and extent of roadway repair requirements in and around the project area to a greater extent than would otherwise be required for roadway upkeep and repair under normal vehicular flow conditions.

IMPACTS

Impact UTL-1: Would the Proposed Project require or result in construction of new stormwater drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects?

The 2002 EIR as Addended concluded that no significant impacts would occur related to the construction of new stormwater drainage facilities for the 16th/Wood sub-district (Impact 4.9-7). The Proposed Project, located in the Port's Maritime sub-district, would involve the construction of new stormwater drainage facilities, including storm drainage pipes, catch basins, HDS (or other approved

stormwater vault treatment system[22]), and a bioretention treatment basin~~, and a stormwater retention pond~~. The Proposed Project would also include installation of an 8-inch asphalt curb around the site's periphery to facilitate the containment of water on-site. These facilities would improve overall site drainage by directing site runoff to the storm drain system and treating sediment and other pollutants prior to discharge to receiving waters.

Construction of these facilities would occur on previously developed land and would not result in increased impervious surfaces or increased site runoff compared to current conditions. However, construction would include the potential storage, use, transport, and/or disposal of hazardous materials (e.g., fuels, oils, solvents) used for equipment. Additionally, construction activities would involve ground disturbance that could result in sediments and other pollutants being transported into surface waters, or hazardous materials entering groundwater from accidental spills, thereby degrading water quality.

Preparation of a Small Project SWPPP would be required as part of the submittals for the Port Development Permit application, as described in Section 3.~~7~~8, "Hydrology and Water Quality This would include requirements for inspections and monitoring, good housekeeping, BMPs, as well as requirements to revise the SWPPP and implement revisions as needed to protect stormwater quality. BMPs to be implemented during construction to prevent soil erosion and discharge of sediment to the Outer Harbor may include, but are not limited to, fiber rolls or other sediment controls, wind erosion control, stabilized construction entrances/exits, and non-stormwater and waste management.

In addition to compliance with state regulations, the Proposed Project would implement SCA GEO-1, which would require preparation of an erosion and sedimentation control plan, including installation of devices to trap, store and filter out sediment as well stormwater retention basins. As described in Section 3.~~6~~7, "Hazards and Hazardous Materials," additional BMPs would be implemented to ensure the proper handling, storage, and disposal of hazardous materials and waste, which would further reduce potential impacts related to hazardous materials during construction, consistent with SCA HAZ-1 and SCA HAZ-2.

Implementation of the Proposed Project would not result in a new significant impact. No mitigation measures are required; however, the following SCA would be applied to the Proposed Project:

SCA HYD-1: Stormwater Pollution Prevention Plan (SWPPP): (*Note: This SCA would be superseded by the Port's Development Permit, which requires a Small Project SWPPP for projects that disturb less than one acre*.)

- **SCA HAZ-1: Best Management Practices for Soil and Groundwater Hazards:** See Section 3.7, "Hazards and Hazardous Materials."
- **SCA HAZ-2: Hazards Best Management Practices:** See Section 3.7, "Hazards and Hazardous Materials."
- **SCA GEO-1: Erosion and Sedimentation Control Plan:** See Section 3.5, "Geology and Soils."

[22] Stormwater treatment system to follow Basic Treatment per the Washington Department of Ecology Technology Assessment Protocol – Ecology (TAPE): https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies.

The Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

Impact UTL-2: Would the Proposed Project exceed water supplies available to serve the redevelopment program from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects?

The 2002 EIR as Addended concluded that there would be potentially significant impacts with regard to potable water demand (Impact 4.9-8). The Proposed Project would require approximately 200,000 gallons of water for dust mitigation and fire suppression during construction. If potable water were to be used during construction, the volume of water used would represent a fraction of EBMUD's 2025 projected water demand of 276 million gallons per day (MGD) (i.e., the next year for which projections are available at the time of planned construction), which EBMUD is expected to meet during normal and single dry years over the next 20 years (EBMUD 2016). During multi-year droughts, EBMUD would use supplemental supplies (e.g., water transfer, groundwater banking, etc.) to help meet projected demand (EBMUD 2016). As such, there would be sufficient water supplies available to serve the Proposed Project. Therefore, the Proposed Project would not exceed available water supplies as a result of construction activities and would not require the expansion of existing water facilities.

Once in operation, the Proposed Project would require approximately 65,000 gallons of water for dust control during offloading of construction aggregates from each OGV. Additionally, 8,000 to 10,000 GPD would be required during warmer months (e.g., May-October) and approximately 5,000 ~~gallons per week~~ GPD during the rest of the year to maintain stockpile moisture levels, and provide dust control during material storage and transfer. This water would primarily be sourced from pumped water from the self-unloading OGV ship holds. In 2019, OGVs arriving in the Bay carried an average of 144,608 gallons each, totaling 6,073,770 gallons over the course of the year. OGV ~~aggregate~~ ship hold water would be stored in ~~20 water storage tanks, each with~~ an on-site ~~10,000-gallon capacity~~storage tank, on the north side of the Ship Unloading Hopper. The tank would have a one-million-gallon capacity sustained by pumped clean water from the self-unloading OGV holds and additionally by EBMUD recycled water when needed. ~~Additionally, accumulated stormwater runoff (i.e., "reused" water) from the site's stormwater retention pond, which would hold approximately 57,600 gallons, would also be collected and stored in these tanks for the same purpose.~~ The Oakland Marine Terminal would receive up to 48 OGV calls per year, with the ability to fill just over 14 storage tanks nearly every week. Thus, OGV ship hold water would be sufficient to meet Project water demand during operation, which could reach up to 5,850,000 gallons per year.

Finally, potable water would be required for the scale house operations (e.g., restroom, kitchen, and laboratory); however, this would represent a small portion of the Proposed Project's overall water demand and would be consistent with typical bathroom and drinking water usage for an office with eight full-time employees, or roughly 58 gallons per capita per day (EBMUD 2016). Thus, by primarily relying on OGV water and EBMUD recycled water (as needed) ~~to supplement~~for dust control and the need to maintain aggregate moisture, the Proposed Project would not exceed available water supplies or result in construction of water facilities or expansion of existing facilities during operation.

The Proposed Project would not exceed water supplies available require construction of water facilities or expansion of existing facilities. Therefore, the Proposed Project would not substantially increase the

severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Impact UTL-3: Would the Proposed Project result in a determination by the wastewater treatment provider that serves or may serve the redevelopment program that it does not have adequate capacity to serve the redevelopment program's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects?

The 2002 EIR as Addended concluded that there would be less-than-significant impacts with regard to increased sewer flows (Impact 4.9-9). The Proposed Project would include a two-story, 3,000-square-foot pre-engineered metal scale house building, which would also serve as an office and provide support rooms for staff to run the terminal and monitor the inbound and outbound truck scale traffic. The scale house would include a restroom facility and kitchen area to serve up to eight full-time employees (although a maximum of three employees would be using the scale house). Sewer flows for the Proposed Project would be consistent with a typical office building, which, for up to eight employees, would be approximately up to 200 GPD (~~U.S. Environmental Protection Agency [~~USEPA~~]~~ 2019). No more than 18,000 GPD of wash water would be discharged to the sanitary sewer.

Wastewater would be conveyed to an existing sanitary sewer line just north of the scale house, which drains to an EBMUD pump station at 7th Street near Maritime Street (City of Oakland 2012). Flows would then be conveyed for treatment at EBMUD's Main Wastewater Treatment Plant (MWWTP), which is located near the foot of the Bay Bridge, northeast of the Proposed Project. The average annual daily flow to the MWWTP is approximately 54 MGD (EBMUD 2016). Thus, EBMUD would have adequate capacity to serve the Proposed Project.

The Proposed Project would not result in a determination by the wastewater treatment provider that it does not have adequate capacity to serve the Proposed Project's projected demand in addition to the providers' existing commitments. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended. No mitigation measures are required.

Impact UTL-4: Would the Proposed Project be served by a landfill with insufficient permitted capacity to accommodate the redevelopment program's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects? Would the Proposed Project violate applicable federal, state, or local statutes and regulations related to solid waste?

The 2002 EIR as Addended concluded that there would be potentially significant impacts related to solid waste disposal needs (Impact 4.9-10). The Proposed Project would result in an increase in solid waste as well as demand for solid waste services. Once in operation, the Proposed Project would generate limited amounts of solid waste from personnel working at the scale house, which would be typical of an office building. However, during construction, the Proposed Project would generate up to approximately 13,500 cy of waste consisting of asphalt pavement (1,000 cy), fill soil (6,000 cy), structural fill (3,000 cy), and structural concrete (3,500 cy). Approximately 14 percent of asphalt pavement would be crushed and reused on-site (Mitigation Measure 4.9-8), while the remainder of construction debris would be recycled into the construction market (Mitigation Measure 4.9-7), brought to local recycling centers, or disposed of at the at either the Vasco Road Landfill or the Altamont Landfill and Resource Facility near Livermore. As of 2016, the Vasco Road facility has a remaining capacity of 7,379,000 cy and is

anticipated to have adequate solid waste disposal capacity through 2022 (CalRecycle 2019a). As of 2014, the Altamont facility had a remaining capacity of 65,400,000 cy and is anticipated to have adequate solid waste disposal capacity until at least 2025 (CalRecycle 2019b). Therefore, the Proposed Project would be served by landfills with existing capacity and would not result in the construction or expansion of existing facilities.

Additionally, the Proposed Project would not generate solid waste in excess of federal, State or local standards or impair the attainment of any solid waste goals. It would comply with applicable local management and reduction regulations related to solid waste, which support the 50 percent waste reduction goal mandated by state law (AB 939), by implementing SCA UTL-2, which would require preparation of Construction & Demolition WRRP and ODP for review and approval that would minimize overall waste diverted to the landfill. No federal solid waste management standards would apply to the Proposed Project.

The Proposed Project would not be served by a landfill with insufficient permitted capacity to accommodate the Proposed Project's solid waste disposal. Mitigation Measures 4.9-7 and 4.9-8 would be applied. Therefore, the Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended, which was **less than significant with mitigation**.

Impact UTL-5: Would the Proposed Project result in a determination by the energy provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects? Would the project violate applicable federal, state, and local statutes and regulations relating to energy standards?

The 2002 EIR as Addended concluded that there would be less-than-significant impacts to energy demand (Impact 4.9-11). The Proposed Project would require increased energy supply compared to current operations. To support the Proposed Project components, existing electric infrastructure that crosses the Project site would be relocated in a new underground electrical feed. Additionally, natural gas lines would be capped and abandoned in place. Prior to any upgrades or replacement of underground electric lines, the Applicant would ensure that relevant agency approval is received to avoid conflicts with existing subsurface utilities, consistent with SCA UTL-3.

Electrical power would be required to operate construction equipment and supporting infrastructure (e.g., security lighting). Power would be provided by existing Port power connections combined with diesel generators for smaller equipment and power tools. The Port distributes 12 kilovolt power to most of the Maritime sub-district from its Davis sub-station (City of Oakland 2002). Existing feeder into the OAB switchgear can deliver 7.4 megawatts (MW); the switchgear itself is rated at between twice and three times that amount (City of Oakland 2002).

Onshore operations components requiring electricity would include the receiving hopper, radial stacking conveyor system, barge reclaim conveyor system, scale house with attached equipment maintenance bay, truck scales, and lighting. Additionally, it is anticipated that annual net energy consumption for Project operations would be approximately 2.1 MW. The Port can deliver up to approximately 7.4 MW of power to the Project site. Thus, existing capacity is adequate to serve the Proposed Project and additional facilities or sources of energy would not be required

Additionally, the Proposed Project would not violate statutes or regulations relating to energy standards, as it would be consistent with BAAQMD's climate protection program, which includes measures to promote energy efficiency (see Section 3.~~5~~6, "Greenhouse Gas Emissions").

No mitigation measures are required; however, SCA UTL-3 would be applied to the Proposed Project.

- **SCA UTL-3: Underground Utilities:**

  Prior to issuance of a building permit:

  The project applicant shall submit plans for review and approval by the Building Services Division and the Public Works Agency, and other relevant agencies as appropriate, that show all new electric and telephone facilities; fire alarm conduits; street light wiring; and other wiring, conduits, and similar facilities placed underground. The new facilities shall be placed underground along the project applicant's street frontage and from the project applicant's structures to the point of service. The plans shall show all electric, telephone, water service, fire water service, cable, and fire alarm facilities installed in accordance with standard specifications of the serving utilities.

The Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

Impact UTL-6: Would the Proposed Project accelerate or advance the timing and extent of roadway repair requirements in and around the project area to a greater extent than would otherwise be required for roadway upkeep and repair under normal vehicular flow conditions?

The 2002 EIR as Addended concluded that construction and remediation vehicles and increased operations vehicle activity would accelerate or advance deterioration of local roadways and the timing and extent of roadway maintenance and repair (Impact 4.9-12). Truck trips associated with the Proposed Project could advance physical deterioration of local roads in the vicinity of the Proposed Project. During construction, heavy vehicles would be required to import structural fill, concrete, steel, and equipment to the Project area as well as to export materials off-site (see Section 2.5, "Project Construction" and Section 3.~~10~~11, "Transportation"). During operation, aggregates would be transported via truck to concrete ready-mix plants throughout the Bay Area. Under typical operating conditions, approximately up to 375 haul trucks would enter, load, weigh-in, and exit in a day. The Proposed Project anticipates having 70,000 truck trips per year to transport up to approximately 1,500,000 tons of construction aggregates. Thus, the frequency of haul trips from heavy vehicles could deteriorate local roadways beyond current conditions, although road wear would be comparable to that of a container terminal. The City's Community Facilities District Fee, currently under development, would fund road maintenance and repair. Additionally, implementation of SCA UTL-6 would require any public improvements to be made as a result of damage caused by construction activity.

No new mitigation measures are required; however, SCA UTL-6 would be applied to the Proposed Project.

- **SCA UTL-6: Payment for Public Improvements:**

  Prior to issuance of a final inspection of the building permit:

  The project applicant shall pay for and install public improvements made necessary by the project including damage caused by construction activity.

The Proposed Project would not substantially increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended**.**

Table 3.12-1 summarizes the impacts from the 2002 EIR as Addended that apply to the Proposed Project; indicates SCA and/or mitigation measures that would apply to the Proposed Project; and indicates whether a new significant impact or a substantial increase in an identified impact would occur. No new significant impacts or substantial increase in the severity of an impact related to utilities and service systems not previously disclosed in the 2002 EIR as Addended would occur with implementation of the Proposed Project.

Table 3.12-1. Impacts Related to Utilities, Energy, and Service Systems

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact UTL-1: Would the Proposed Project require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	SCA HAZ-1, SCA HAZ-2, and SCA GEO-1	Proposed Project would not result in significant environmental effects through construction of stormwater drainage facilities	Less than significant	No
Impact UTL-2: Would the Proposed Project exceed water supplies available to serve the redevelopment program from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	None	Proposed Project would not exceed available water supplies	Less than significant	No
Impact UTL-3: Would the Proposed Project result in a determination by the wastewater treatment provider that serves or may serve the redevelopment program that it does not have adequate capacity to serve the redevelopment program's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	None	Proposed Project would not exceed existing wastewater treatment capacity	Less than significant	No

Proposed Project Impact	Proposed Project Mitigation Measures and SCA	Proposed Project Impact Summary	Level of Significance for OAB Area Redevelopment Plan as Modified by the Proposed Project	Is it a new significant environmental impact or a substantial increase in the severity of a previously identified significant Impact in the 2002 OAB EIR as Addended?
Impact UTL-4: Would the Proposed Project be served by a landfill with insufficient permitted capacity to accommodate the redevelopment program's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects / Violate applicable federal, state, or local statutes and regulations related to solid waste?	Mitigation Measure 4.9-7, Mitigation Measure 4.9-8, and SCA UTL-2	Proposed Project would not substantially exceed landfill capacity	Less than significant with mitigation	No
Impact UTL-5: Would the Proposed Project result in a determination by the energy provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects / Violate applicable federal, state and local statutes and regulations relating to energy standards?	SCA UTL-3	Proposed Project would not exceed existing energy capacity	Less than significant	No
Impact UTL-6: Would the Proposed Project accelerate or advance the timing and extent of roadway repair requirements in and around the project area to a greater extent than would otherwise be required for roadway upkeep and repair under normal vehicular flow conditions?	SCA UTL-6	Proposed Project would not accelerate roadway repair requirements	Less than significant	No

Chapter 4
Cumulative Impacts

4.1 INTRODUCTION

This chapter presents the setting for the cumulative impacts analysis and characterizes the significance of cumulative impacts to which the Proposed Project may contribute. A cumulative impact consists of an impact which is created as a result of the combination of the Proposed Project together with other past, present, and probable future projects causing related impacts (CEQA Guidelines Section 15130[a][1]). Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines Section 15355[b]). Under CEQA, an EIR must discuss the cumulative impacts of a project when the project's incremental contribution to the group effect is "cumulatively considerable." An EIR does not need to discuss cumulative impacts that do not result in part from the project evaluated in the EIR.

To meet the adequacy standard established by Section 15130 of the CEQA Guidelines, an analysis of cumulative impacts must contain the following elements:

- an analysis of related past, present, and probable future projects or planned development that would affect resources in the project area similar to those affected by the proposed project;
- a summary of the environmental effects expected to result from those projects with specific reference to additional information stating where that information is available; and
- a reasonable analysis of the combined (cumulative) impacts of the relevant projects.

The cumulative impacts analysis must evaluate a project's potential to contribute to the significant cumulative impacts identified, and it must discuss feasible options for mitigating or avoiding any contributions assessed as cumulatively considerable. Additionally, the discussion of cumulative impacts is not required to provide as much detail as the discussion of the effects attributable to the project alone. Rather, the level of detail is to be guided by what is practical and reasonable.

4.2 METHODS USED IN PREVIOUS CEQA DOCUMENTS

Section 15130 of the CEQA Guidelines provides two alternative approaches for analyzing and preparing an adequate discussion of significant cumulative impacts:

- the list approach, which involves listing past, existing, and probable future projects or activities producing related to cumulative impacts, including, if necessary, those projects outside the control of the lead agency; or

- the projection approach, which uses a summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions and their contribution to the cumulative effect.

The 2002 EIR as Addended used a hybrid approach for evaluating cumulative impacts. A combination of both plans and projects were identified, and the temporal scope of the cumulative analysis was the year 2020. **Table 4.2-1** contains a list of these plans and projects. The geographic scope of the analysis generally encompassed the City and adjacent jurisdictions.

Table 4.2-1. Plans and Probable Future Projects Used in Cumulative Impact Analysis (2002 Program EIR)

Plan or Project Name Agency	Description	Status	Relevant Environmental Factors
General Plan City of Oakland	City-wide plan	Last updated to include Estuary Policy Plan Element in 1999	Air Quality Land Use Public Services Noise Traffic
West Oakland Cumulative Growth Scenario Update City of Oakland	Update of existing and future economic and land use assumptions for more than 50 area planned projects	Update completed January 2002	Air Quality Land Use Traffic
Projections 2002 Association of Bay Area Governments	Demographic projections for nine Bay area counties through 2025	Published 2001	Air Quality Housing Noise Population/Employment /Housing Public Services Traffic
General Plan City of Emeryville	City-wide plan	Last updated to revise the Housing Element in 2001	Air Quality Land Use Public Services Traffic
Alameda Point General Plan Amendment City of Alameda	Re-designation of land uses and adoption of General Plan policies for 1,444 acres	Public Review Draft EIR published November 2001	Air Quality Land Use Public Services Traffic
50 Foot Navigation Improvements U.S. Army Corps of Engineers, Port of Oakland	Dredge Oakland Outer and Inner harbors to -50 feet mean lower low water	EIR/Environmental Impact Study (EIS) complete Construction approximately 2001-2005	Biology Noise Surface Water

Plan or Project Name Agency	Description	Status	Relevant Environmental Factors
Bay Bridge Replacement California Department of Transportation	Replacement of the Bay Bridge from Yerba Buena Island to Oakland	EIS complete Construction approximately 2002-2006	Biology Noise Surface Water
Main Wastewater Treatment Plant Improvement East Bay Municipal Utility District	Expansion of treatment plant facilities, capacity, and administrative facilities	Undetermined future	Air Quality Land Use Noise
Alameda Point Wildlife Refuge U.S. Fish and Wildlife Service	565 upland acres, 413 submerged acres for a wildlife refuge	Environmental Assessment (EA) complete	Air Quality Land Use Traffic
Catellus Mixed Use Development EIR City of Alameda	Mixed use, including affordable housing at Fleet and Industrial Supply Center (FISC) Annex	EIR complete	Air Quality Land Use Traffic
Oakland Airport Development Program Port of Oakland	Airport expansion: terminals, circulation, parking	EA complete Supplemental EIR (SEIR) in progress Construction of some component projects underway	Air Quality Noise
San Francisco Airport Expansion City and County of San Francisco	Airport expansion	EIS/EIR complete Undetermined future	Air Quality Noise
Reuse of Bay Area Military Bases Multiple agencies	Conversion from military to community uses, including demolitions Oakland: Fleet and Industrial Supply Center, Oakland (FISCO) and Oak Knoll Alameda: Naval Air Station (NAS) and FISCO Annex San Francisco: Presidio, Hunters Point Naval Annex, and NAS Treasure Island Vallejo: Mare Island Shipyard Novato: Hamilton Army Airfield	In various stages of reuse Build-out various	Cultural Resources Land Use

The 2002 EIR as Addended found that OAB Area Redevelopment Plan would not result in cumulatively considerable contributions to the following significant cumulative impacts: land use compatibility, noise, hazardous wastes, population and housing, public services and utilities, recreation, aesthetics, biological species and wetlands, seismic risk, groundwater, and surface water. The 2002 EIR as Addended concluded that the OAB Area Redevelopment Plan would make considerable contributions to the following significant cumulative impacts: traffic congestion (significant and unavoidable), reduced truck parking (significant and unavoidable), diesel emissions/air quality (significant and unavoidable), historic cultural resources (significant and unavoidable), police protection services (significant and unavoidable), and invasive species (significant and unavoidable). Note that the San Francisco Airport Runaway expansion project (identified in Table 4.2-1) is no longer considered in the analysis going forward as this project has not occurred.

The Port has prepared or been involved with four addendums to the 2002 EIR, with each addendum evaluating if there were changes to the cumulative impact compared to what was previously analyzed. The 2012 addendum updated the list of projects to consider based on several projects not included before as shown in **Table 4.2-2**. None of the four addendums resulted in any changes to the significant cumulative impacts.

Table 4.2-2. Plans and Probable Future Projects Used in Cumulative Impact Analysis (2012 Addendum Update)

Plan or Project Name Agency	Description	Status	Relevant Environmental Factors
Port-Wide cargo throughput per the 2002 OAB Area Redevelopment Plan Port of Oakland	Port's target cargo throughput is 4.05 million TEU	Due to recession, cargo has not yet reached target throughput	Air Quality Biology Surface Water Traffic
Replace Outer Harbor Berths Port of Oakland	Replacement of Berths 21, 20, 10, 9, and 8 with a new Berth 21	Part of 2002 OAB Area Redevelopment Plan; the BCDC Seaport Plan; and the Port's long-term development plan	Biology Noise Surface Water
Gateway Park Multi-agency	Create a park at the bay bridge touchdown	Completed	Air Quality Land Use Noise
San Francisco Oakland Bay Bridge Maintenance Facilities Caltrans	Replace the existing maintenance facilities for the Bay Bridge	Completed	Air Quality Land Use Noise Traffic
San Francisco Bay Trail Projects Multi-agency	Create trail and facilities that connect the San Francisco bay Trail	Build-out various	Air Quality Noise Traffic
Various Private Development Projects	Several housing and retail development projects located near the Project site	Build-out various	Air Quality Land Use Noise Traffic
Broadway Valdez District Specific Plan City of Oakland	96-acre mixed use retail core	Build-out various	Air Quality Land Use Traffic
Lake Merritt Station Area Plan City of Oakland	Transit oriented development of retail housing and office uses	Build-out various	Air Quality Land Use Traffic
West Oakland Specific Plan City of Oakland	Mixed Use Plan to redevelop area	Build-out various	Air Quality Land Use Traffic
Outdoor Advertising City of Oakland	Develop advertising signs for City-owned property	Build-out various	Aesthetics
Central District Urban Renewal Plan City of Oakland	Redevelopment Plan for Central District that extends plan duration and receipt of tax revenue	Build-out various	Air Quality Land Use Noise Traffic

4.3 METHODS USED IN THIS ANALYSIS

4.3.1 Approach to Analysis: Projection Approach

This ~~Draft~~ Final SEIR uses a projection approach for the cumulative impact analysis. Programs related to the Proposed Project that are included in the cumulative analysis were determined using several factors, including the location and type of activity and the characteristics of the activity related to resources with the potential to be affected by the Proposed Project. Summaries of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions and their contribution to the cumulative effect were considered in this cumulative impact analysis. This includes consideration of new or updated plans compared to the 2002 EIR as addended. The primary basis for the cumulative impact analysis is the 2002 EIR as Addended; as a programmatic review document for the redevelopment of a large area, it contains much of the cumulative projection.

4.3.2 Resource Topics Not Requiring Cumulative Analysis

The Proposed Project could make a considerable contribution to potential cumulative impacts related to the following resource topics: traffic congestion, diesel emissions/air quality, and GHGs.

For all other resource topics, as shown in **Table 4.3-1**, either significant cumulative impacts do not exist, or the Proposed Project would not have any potential to make a considerable contribution to any potential cumulative impacts. These latter resource topics are not evaluated further in this ~~Draft~~ Final SEIR.

Table 4.3-1. Resource Topics Not Requiring Cumulative Impacts Analysis

Resource Topic Not Discussed Further	Rationale
Aesthetics	The site is similar to the area analyzed under the 2002 EIR as Addended and compliance with City design review and lighting policies would avoid a significant cumulative contribution.
Biological Resources	There would be no changes from the 2002 EIR as Addended, which concluded that there is a cumulative contribution to increased invasive species from the OAB Area Redevelopment Plan.
Cultural Resources	There would be no changes from the 2002 EIR as Addended, which concluded that there is a cumulative contribution to loss of historic resources relating to World War II–era buildings from the OAB Area Redevelopment Plan.
Hazards & Hazardous Wastes	There would be no substantial changes from the 2002 EIR as Addended, which concluded that there is no cumulative contribution from hazards and hazardous wastes. The additional hazards from the construction aggregates does not result in a substantial change in exposure and is less than significant.
Public Services	There would be no changes from the 2002 EIR as Addended, which concluded that there is a cumulative contribution to police protection services from the OAB Area Redevelopment Plan.

4.3.3 Geographic Scope of Analysis

The geographic scope of the cumulative analyses varies with the resource topic being discussed. The differences in geographic scope used for each topic is shown in **Table 4.3-2**.

Table 4.3-2. Geographic Scope for Resources with Potential Cumulative Impacts Relevant to the Proposed Program

Resource Area	Geographic Scope
Air Quality	San Francisco Bay Area Air Basin (SFBAAB)
Geology	Port of Oakland, West Oakland
Greenhouse Gas Emissions	State of California and Global
Hydrology & Water Quality	San Francisco Bay and Groundwater
Noise	Port of Oakland, West Oakland, BART, Railroads, and major Roadways including I-880 and I-80/Bay Bridge
Traffic	Port of Oakland, West Oakland, BART, Railroads, and major Roadways including I-880 and I-80/Bay Bridge
Utilities	Service Area of agencies providing services to the Project area

4.4 CUMULATIVE PROJECTS

Table 4.4-1 lists relevant projections contained in an adopted local, regional or statewide plan, or related planning document in the Bay Area that could affect resources similar to or the same as those affected by the Proposed Project (with the exception of the Howard Terminal project). The cumulative impact evaluation assumes that the impacts of past and present projects are represented by baseline conditions (as previously described), and cumulative impacts are considered in the context of baseline conditions alongside reasonably foreseeable future projects.

Section 4.5, “Cumulative Setting,” describes the cumulative setting in the context of past, present, and probable future projects that may have the same or similar impacts as those of the Proposed Project. Section 4.5 then identifies whether these impacts are considered cumulatively significant and discusses whether the incremental effect from Proposed Project activities would be considerable in the context of those identified significant cumulative impacts.

Table 4.4-1. List of Probable Future Projects that May Cumulatively Affect Resources of Concern for the Proposed Project

Plan or Project Name Agency	Description	Status	Relevant Environmental Factors
General Plan City of Oakland	City-wide plan	Originally adopted in 1998; Housing and Safety Element updates in 2004; Noise Element updates in 2005; Adopted Revised Bicycle Master Plan in 2007	Air Quality GHG Land Use Public Services Noise Traffic
Downtown Oakland Specific Plan City of Oakland	Downtown Oakland	Currently under public review	Air Quality GHG Noise Traffic
BART West Oakland Transit Oriented Development Bay Area Rapid Transit (BART)	West Oakland	Adopted June 11, 2020	Air Quality GHG Noise Traffic
General Plan City of Emeryville	City-wide plan	Adopted in 2019	Air Quality GHG Land Use Public Services Noise Traffic
Plan Bay Area 2040 Association of Bay Area Governments	Demographic projections for nine bay area counties through 2040	Adopted July 2017	Air Quality GHG Housing Noise Population/Employment /Housing Public Services
Alameda Point General Plan and Zoning Ordinance Amendments, Master Infrastructure Plan, and Town Center and Waterfront Plan City of Alameda	Re-designation of land uses and adoption of General Plan policies for 1,444 acres	Public Review Draft EIR published November 2001	Air Quality Land Use Public Services Traffic
Oakland Airport Land Use Plan Port of Oakland	Land Use and Noise compatibility information regarding land near the airport	Adopted in 1986	Land Use Noise

Plan or Project Name Agency	Description	Status	Relevant Environmental Factors
West Oakland Truck Management Plan City of Oakland and Port of Oakland	Plan to reduce haul trucks on local streets in West Oakland	April 2019	Air Quality GHG Noise Traffic
Owning Our Air: The West Oakland Community Action Plan Bay Area Air Quality Management District (BAAQMD), West Oakland Environmental Indicators Project, and California Air Resources Board (CARB)	Plan to reduce West Oakland Community air emissions	October 2019	Air Quality GHG Hazards
Maritime Air Quality Improvement Plan (Seaport Air Quality 2020 and Beyond Plan) Port of Oakland	Plan to improve air quality for sources related to the Port of Oakland	May 2019	Air Quality GHG Hazards
BAAQMD Plans BAAQMD	Plans for the SFBAAB to attain air quality standards	various	Air Quality GHG Hazards
Scoping Plan and Updates California Air Resources Board	Statewide plan on achieving GHG reduction goals	Last updated in 2017	GHG
San Francisco Bay Area Seaport Plan San Francisco Bay Conservation and Development Commission (BCDC) and Metropolitan Transportation Commission (MTC)	Maritime element of MTC's Regional Transportation Plan and basis of BCDC's Bay Plan port policies, including cargo throughput goals for each port	Last amended in 2012; update in progress in 2020	Air Quality GHG Land Use Public Services Traffic
San Francisco Bay Plan BCDC	Plan to preserve the San Francisco Bay natural resources and develop the Bay and shoreline to the highest potential with minimum Bay filling	Last amended in 2019	Biological Resources Land Use Hydrology Traffic Water Quality

Plan or Project Name Agency	Description	Status	Relevant Environmental Factors
Oakland Waterfront Ballpark District Project City of Oakland	Waterfront multi-purpose Major League Baseball stadium with residential units, office and mixed retail, and cultural uses	An NOP was issued on November 30, 2018	Air Quality GHG Noise Traffic

4.5 CUMULATIVE SETTING

4.5.1 Air Quality

Regional air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality. The cumulative air quality analysis for this redevelopment program follow the CEQA guidelines developed by BAAQMD. These guidelines provide that a proposed action resulting in significant impacts to air quality is also considered to have a significant cumulative impact to air quality.

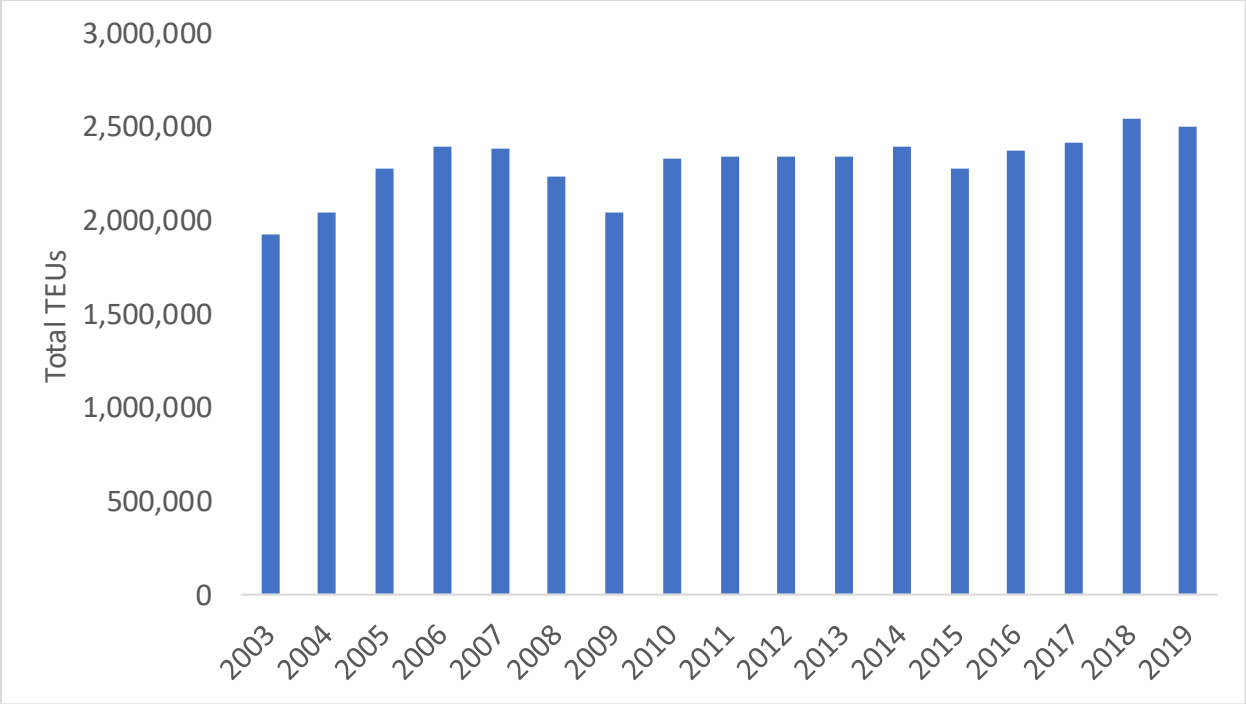
The Port is located within the San Francisco Bay Area Air Basin, which is currently in nonattainment of the ambient standards (NAAQS and CAAQS) for ozone and PM2.5 and in nonattainment of the ambient standard (CAAQS) for PM10. Recent trends in ambient air quality and emissions in the vicinity of the Port were presented in Section 3.4.1. Emissions of NOx and ROG from the Proposed Project would potentially contribute to ozone production. Emissions of NOx, ROG, and SO_2 would potentially contribute to production of secondary PM2.5 (particulate matter with a diameter less than 2.5 microns) through chemical transformation and particle formation in the atmosphere. Direct emissions of PM2.5 from the Project would also contribute to ambient PM2.5 concentrations.

The Proposed Project is located at the Port's OHT in the Maritime Sub-district described in the 2002 EIR as Addended. The Port has continued to develop the surrounding area in a manner consistent with the 2002 EIR as Addended. Analysis performed under the 2002 EIR as Addended assumed the OHT would operate as a cargo terminal. The maximum ("full buildout") future year scenario projected under the 2002 EIR as Addended included maritime activities consistent with an annual cargo volume of 4 million TEUs. Recent cargo volume trends at the Port are illustrated in **Figure 4-1**; Port cargo volume in 2019 was 2.50 million TEUs. The Port's most recent air emissions inventory was prepared for 2017 when cargo volume totaled 2.42 million TEUs. Estimates of future Port cargo volumes depend critically on local, regional, and global economic projections and are highly speculative. Emission estimates for the future year "full buildout" scenario presented the 2002 EIR as Addended were based on assumptions about freight logistics, technologies, emission factors (i.e., the amount of emissions per unit of activity such as engine horsepower-hours for different types of engines), and data that have since become outdated. A more accurate estimate of current emissions from the Port Maritime Subdistrict is available from the Port's 2017 Seaport Emissions Inventory (Port of Oakland 2018). Emissions from the Proposed Project are presented within the context of the current (2017) emissions from all sources at the Port of

Oakland Seaport in **Table 4.5-1** (2017 is the most recent available inventory year). This does not include non-Port sources of emissions from the OAB Area Redevelopment Plan such as sources developed in West Oakland by the City.

The exposure of the West Oakland Community to TACs, especially DPM, is well documented and active plans are in place to reduce the emissions and exposure of the West Oakland Community to TACs. The TACs in the West Oakland Community result from a combination of sources including major interstates and highways, the Port with its ships and cargo handling, the nearby railyards, Port truck traffic, and other industrial facilities in the area. **Table 4.5-2** shows the cumulative health impacts according to the most recent human HRA for the West Oakland Community (BAAQMD 2019) along with the additional health impacts from the addition of the Proposed Project. This HRA for the West Oakland Community contains the current health risks from OAB Area Redevelopment Plan that is in operation today, but does not contain any health risks from the Proposed Project or other elements of the OAB Area Redevelopment Plan that are not yet operational.

Figure 4-1. Annual cargo volume (TEUs) at the Port of Oakland, 2003 – 2019



Source: Port of Oakland 2020

Table 4.5-1. Cumulative Summary of Current Port Plus Mitigated Proposed Project Operational Emissions (Tons per Year)

Source	ROG	NOx	Exhaust PM10	Fugitive Dust PM10	Total PM10	Exhaust PM2.5	Fugitive Dust PM2.5	Total PM2.5
OGV Transit and Maneuvering	1.17	25.19	0.28	N/A	0.28	0.26	N/A	0.26
OGV Hoteling	1.05	27.7	0.39	N/A	0.39	0.36	N/A	0.36
Tug (Assist + Barge)	0.97	6.99	0.24	N/A	0.24	0.24	N/A	0.24
Trucks – on-site	0.40	5.06	<0.01	2.37	2.37	<0.01	0.36	0.36
Trucks – off-site	0.08	5.61	0.06	0.49	0.55	0.05	0.12	0.17
Off-Road Equipment	0.86	0.68	0.04	1.41	1.45	0.04	0.21	0.25
Aggregate Transfer	N/A[7]	N/A[7]	N/A[7]	0.61	0.61	N/A[7]	0.09	0.09
Aggregate Stockpiles	N/A[7]	N/A[7]	N/A[7]	2.97	2.97	N/A[7]	0.45	0.45
Employee Commute	<0.01	0.06	<0.01	0.01	0.01	<0.01	<0.01	<0.01
Total:[1]	*4.52*	*71.23*	*1.01*	*7.85*	*8.86*	*0.95*	*1.23*	*2.18*
Current (2017) Port Maritime Emissions[2]	223	2,787	58.4[3]	N/A[7]	59.2	54.9[5]	N/A[7]	54.9
Less 1995 Alternative Baseline	(50)	(65)	(46)[6]	N/A[7]	(46)	(46)[4]	N/A[7]	(46)[4]
Net Port Maritime Emissions	173	2,722	12.4	N/A[7]	13.2	9.0	N/A[7]	9.0
Port Maritime Emissions with Project	177	2,793	13.4	N/A7	22.1	10.0	N/A7	11.2

1. Mitigated emissions
2. Based on 2017 Maritime Emissions Inventory (Port of Oakland 2018; Table ES-1a)
3. Based on OGV PM10 (engine and boiler exhaust) and exhaust (i.e., DPM emissions from all other sources)
4. Assumed equal to PM10 (PM2.5 emissions were not reported in the 2002 EIR)
5. Based on total PM2.5
6. Based on total PM10 (exhaust not reported separately)
7. OGVs and Tugs do not have any fugitive dust emissions. Aggregate transfer and stockpiles only have fugitive dust emissions.

Table 4.5-2. Summary of Cumulative Risk

	Cancer Risk (per million)	PM2.5 Concentration ($\mu g/m^3$)
Existing Conditions (from West Oakland Community Action Plan)	200	1.7[2]
Proposed Project	7.2[1]	1.1[3]
Cumulative Impact	207	2.8
2011/2017 BAAQMD Significance Threshold	100	0.8

1. Combined impact of construction and operations (see Appendix D, *Health Risk Assessment for the Draft SEIR*); values based on level of significance for a local resident (MEIR) impact (the MEIW impact is lower). This is the worst-case scenario based on the current cumulative conditions by adding the Proposed Project changes directly to the MEIR from the West Oakland Community Action Plan, regardless of differences in location of the MEIR. This does not include portions of the OAB Area Redevelopment Plan and other plans in the area that have not been fully implemented yet.
2. Population weighted annual average impact
3. This is the PM2.5 concentration for the MEIW for the Mitigated Proposed Project. The MEIR is lower at a 0.1 $\mu g/m^3$ for the mitigated Proposed Project.

4.5.2 Geology

The Bay Area is a seismically active region, and persons and property within this region are at risk from earthquake damage; as the number of structures and people increase due to redevelopment as proposed in combination with past, other current, and probable future projects comprising people-attracting land uses, the cumulative risk to persons and property increases.

There is no evidence that significant cumulative impacts currently exist relative to erosion of topsoils, exposure to expansive soils, or exposure to sub-grade risks to which redevelopment as proposed would contribute, or that such impacts are likely to result from implementation of the OAB Area Redevelopment Plan with the Proposed Project. The OAB Area Redevelopment Plan area is primarily fill, which does not represent topsoils, expansive soils, or sub-grade features.

4.5.3 Greenhouse Gases

GHG emissions are, by their nature, cumulative impacts. Consequently, the cumulative analysis is the same as the discussion concerning Proposed Project impacts. As indicated in the analysis in Section 3.6, "Greenhouse ~~Gases~~Gas Emissions," the Proposed Project would generate GHG emissions, but as previously noted, this is not new information since information on climate change and GHG emissions was known or could have been known in 2002. Implementation of the Mitigation Measure ERA AQ-1 would reduce the Proposed Project's GHG emissions. The Port is implementing its 2020 and Beyond Plan in part to reduce Port-wide GHG emissions.

4.5.4 Hydrology & Water Quality

Potential cumulative hydrology and water quality impacts are typically related to local and regional surface water bodies, such as the Bay, and groundwater conditions. The 2002 EIR as Addended identified the Bay, the receiving waters for the Proposed Project site and the OAB Area Redevelopment Plan area, as having cumulatively impaired water quality for CWA Section 303(d) list pollutants and

toxics. The 2002 EIR as Addended also identified that increases in 303(d) list pollutants and toxics could represent a significant contribution to this impact. Since the 2002 EIR as Addended, the Bay has been listed as impaired on the CWA Section 303(d) list, specifically for chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, dioxin compounds, furan compounds, invasive species, mercury, PCBs, selenium, and trash. Since the 2002 EIR, the SFBRWQCB has also developed TMDLs and implementation plans for mercury and PCBs. The TMDLs have both identified stormwater runoff as a source of contamination in the Bay.

There is no evidence that significant cumulative impacts currently exist relative to risk from flooding, tsunami, seiche, or excessive runoff. However, the 2002 EIR as Addended found that construction along with other nearby construction or remediation projects, could increase erosion and sedimentation/turbidity.

4.5.5 Noise

The ambient noise conditions at the Proposed Project site, the OAB Area Redevelopment Plan area, and the surrounding West Oakland Community have a cumulative noise level above the recommended noise levels for some land uses, including residential. The noise sources contributing to the ambient noise levels includes Port Operations, BART, Railroads, and major roadways including I-880 and I-80/Bay Bridge. These sources of noise would continue and are likely to increase in the future.

4.5.6 Transportation

Existing LOS and delays at intersections in and near the Proposed Project site are shown in Table 3.11-4. Local roadways and nearby freeways, including I-880, I-980, I-80, and I-580, currently experience congestion issues. Projected growth in Port throughput and increased residents and employees resulting from growth included in the OAB Area Redevelopment Plan area as well as plans and projects shown in Table 4.4.-1 would generate additional vehicular traffic on local roads and freeways.

4.5.7 Utilities

The existing water supply and cumulative demand for water in EBMUD's service area is planned for in EBMUD 2015 Urban Water Management Plan. According to the 2015 Urban Water management Plan, EBMUD estimates that water demand will increase to 230 MGD by the year 2040, taking into account the implementation of planned water recycling and conservation programs (EBMUD 2016). The EBMUD Plan would include the water demand for those parts of the OAB Area Redevelopment Plan area that are in operation today. While the demand for water in 2040 could be accommodated by EBMUD's water rights during normal water years, these water rights would not be adequate to satisfy water demand during dry years. EBMUD is pursuing a variety of supply projects to be able to reliably meet the projected demands in the future and EBMUD's Water Conservation Master Plan includes existing and planned efforts to support meeting long-term water conservation planning goals through the year 2040. The Proposed Project would rely primarily on water supplied from OGV ship holds during operation and additionally by EBMUD recycled water when needed. Thus, the Proposed Project would not exceed available water supplies or result in construction of water facilities or expansion of existing facilities.

The wastewater services are in the City and EBMUD service areas. The Proposed Project, in conjunction with past, present, and probable future projects, could result in a cumulative increase in wastewater

generation resulting in increased demand on wastewater collection and treatment facilities. It is not anticipated that the cumulative projects would exceed the City's or EBMUD capacity. Other cumulative projects would be required to comply with the City's programs and ordinances regarding adequate function and capacity of the sanitary sewer system.

For solid waste disposal services, the Proposed Project is in the service area of the Altamont and Vasco Road Landfills. The Proposed Project, in conjunction with past, present, and probable future projects, could result in a cumulative increase in solid waste and debris generated by Project construction and operations. However, comprehensive implementation of City waste reduction and diversion requirements and programs would reduce the potential for exceeding existing capacities of the two landfills, which still have adequate capacity.

The electrical and natural gas services are within Pacific Gas and Electric Company's (PG&E's) northern and central California service area with the Project site served the Port. Urbanized portions of City are already served by gas and electricity infrastructure, and the net increased energy demand from probable future projects, relative to the regional service area, would be minimal and would not require expanded or new energy facilities as a direct result of Project development. Because many agencies in California, including the City and the Port, have adopted policies seeking increased use of renewable resources (and have established minimum standards for the provision of energy generated by renewable resources), it is expected that the Port and PG&E will continue to meet future demand for energy via increasing reliance on renewable resources.

4.6 CUMULATIVE IMPACTS

4.6.1 Air Quality

Cumulative Impact AIR-1: Would the Proposed Project result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

According to the 1999, 2011, and 2017 BAAQMD CEQA Guidelines, regional air pollution is largely a cumulative impact. No single project is likely sufficiently large to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts (BAAQMD 1999, 2011, 2017a). As noted above, the San Francisco Bay Area Air Basin is currently in nonattainment of the national and California ozone and 24-hour PM2.5 air quality standards (NAAQS and CAAQS) and in nonattainment of the ambient standard (CAAQS) for PM10. In developing thresholds of significance for air pollutants as shown in Table 3.4-4, BAAQMD evaluated emission levels for which a project's individual impacts would be considered cumulatively considerable. If a project's emissions exceed the significance threshold, the project may have a significant adverse air quality impact on the region's existing air quality and thus be considered a cumulatively considerable contribution to a significant cumulative impact.

As noted in Section 3.4, "Air Quality," maximum annual and daily average NOx emissions from the Proposed Project would exceed the BAAQMD significance threshold. Also noted in Section 3.4, annual PM2.5 concentrations could exceed BAAQMD's risk and hazard threshold for PM2.5, which may cause or contribute to a violation of the PM2.5 CAAQS. Therefore, emissions from the Proposed Project would make a cumulatively considerable contribution to a significant cumulative impact. As described above,

Mitigation Measures ERA AQ-1 and ERA AQ-2 would reduce emissions from the Proposed Project, but NOx emissions and PM2.5 concentrations would remain above the significance thresholds and therefore cumulatively considerable**.**

Under the 2002 EIR as Addended, cumulative impacts were also found to be significant and unavoidable as a result of increases in emissions of criteria pollutants. As described in Section 3.4, criteria pollutant emissions from the Proposed Project are estimated to be no greater than the emissions that would be expected if the Project site were to be used as part of a container terminal, as assumed under the 2002 EIR as Addended. However, there could be a localized increase in PM2.5 emissions due to the fugitive dust emissions from the aggregate stockpiles. Therefore, there is a change in the severity of the previously identified cumulatively considerable **significant and unavoidable** emissions impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

As noted in Section 3.4.1, emissions from the Port of Oakland Seaport, including emissions of NOx and PM2.5, have declined since 2005, and implementation of the Port's 2020 and Beyond Plan is expected to result in further reductions.

Cumulative Impact AIR-2: Would the Proposed Project result in a cumulative exposure of sensitive people to substantial pollutant concentrations?

As identified in the 2002 EIR as Addended, the OAB Area Redevelopment Plan would expose sensitive receptors to substantial amounts of pollutant concentrations. The prior analyses have concluded that the cancer risk and acute HI exceed the BAAQMD thresholds and, therefore, the Proposed Project would also contribute to any cumulatively significant exposure to substantial pollutant concentrations. The HRA conducted for this ~~Draft~~ Final SEIR evaluated if the change in project description to allow for the Applicant's use of construction aggregates would result in a substantial change in health impacts. The Proposed Project portion of the redevelopment would not individually result in health impacts above the individual project health risk BAAQMD thresholds, as discussed in Section 3.4, "Air Quality," and no substantial change in severity of cancer risk would occur. The Proposed Project portion of the Redevelopment would result in PM2.5 concentration above the BAAQMD threshold of 0.3 $\mu g/m^3$ at the MEIW. As discussed in Section 3.4, if the PM2.5 concentration impact had been fully evaluated in the 2002 EIR as Addended, there is a reasonable chance that a significant impact would have been identified; however, this remains uncertain since a detailed analysis was not conducted. It should be noted that current PM2.5 emissions from the Redevelopment Area are much less than what would have been estimated in the 2002 EIR as Addended due to improved drayage truck performance and shore power for ships, as demonstrated by the Port's reduction in DPM from 2005 to 2017, shown in Figure 3.4-2. When combined with the existing health impacts according to the HRA conducted for the WOCAP, the OAB Area Redevelopment Plan health impacts would be above BAAQMD's cumulative health risk thresholds. Implementation of mitigation measures and SCA would reduce these impacts; however, as identified in the 2002 EIR as Addended, the cumulative impacts would remain **significant and unavoidable**. There is no change in the severity of the impact for cancer risks, and hazard indices, but there is potentially a change for PM2.5 concentration for the MEIW.

4.6.2 Geology

Cumulative Impact GEO-1: Would the Proposed Project result in a cumulative exposure of persons or property to seismic risk?

By law, new structures must be designed to applicable California building Code standards, substantially reducing seismic risk. Redevelopment as proposed includes mitigation measures that would further minimize seismic risk. With implementation of these measures, the contribution of the Proposed Project to seismic risk would be less than cumulatively considerable. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** cumulative impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

4.6.3 Greenhouse Gases

Current Port maritime GHG emissions as reported in the 2017 Maritime Emissions Inventory are 181,231[23] mtpy (Port of Oakland 2018), which exceeds BAAQMD's 2011/2017 Guideline recommended GHG emissions threshold. Together with the Proposed Project, total emissions would be 191,109 mtpy.

Implementation of the Proposed Project would result in the generation of GHG emissions from ships, tugs, trucks and operation of buildings on-site, but as noted above, climate change and GHG emissions were not expressly addressed in the 2002 EIR as Addended. However, since information on climate change and GHG emissions was known, or could have been known in 2002, it is not legally a new significant impact as specifically defined under CEQA. Moreover, the 2012 Project intends to implement green building design features and would generate substantially less GHG emissions than the 2002 Project.

Thus, although the analysis evaluates climate change and GHG, there is no resulting significant CEQA impact. The Port would continue to implement its 2020 and Beyond Plan, which is intended in part to reduce GHG emissions from the Seaport.

4.6.4 Hydrology & Water Quality

Cumulative Impact HYD-1: Would the Proposed Project contribute to cumulative impairment to San Francisco Bay Water Quality?

As described in Section 3.8, "Hydrology and Water Quality," sediment loads from aggregate piles, in addition to polluted runoff originating from elsewhere on the Project site, could enter receiving waters and potentially violate water quality standards for the Bay. Additionally, water from the OGV ship holds used for moistening aggregate materials and for dust control during Project operation would have the potential to be a source of stormwater pollution if found to contain contaminants or pollutants at levels in excess of water quality and waste discharge thresholds. However, results from recent water quality tests indicate that the OGV ship hold water did not pose any exceedances for the following parameters: metals, volatile organics, pesticides, enterococcus, salinity, or cyanobacteria; therefore, it would not pose a threat to the Bay (See Appendix G, *Ocean Going Vessel Hold Water Quality Analysis*).

[23] Note that this value has been converted to metric tons per year, and is equivalent to the 2017 Maritime Emissions Inventory value of 199,770 tons per year reported in Table ES-1b of the 2017 Seaport Inventory (Port of Oakland 2018), which is shown in U.S. tons per year.

Furthermore, compliance with Provision F.5.g of the Port's Phase II MS4 Permit (Order No. 2013-0001-DWQ) and the Port's 2015 PCSDM, as well as implementation of proposed stormwater BMPs such as the HDS (or other approved stormwater vault treatment system[24]) and~~,~~ bioretention treatment basin ~~and retention pond~~, as well as the self-contained tire wash system(s), would make the Proposed Project's contribution less than cumulatively considerable~~.~~. The 2012 EIR as Addended also identified the potential for a significant contribution to impairment of Bay water quality. It identified Mitigation Measure 4.15-5, which has been superseded by the Port measures listed above, to reduce contribution of this impact to a less-than-significant level. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** cumulative impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

Cumulative Impact HYD-2: Would the Proposed Project contribute to cumulative impairment to San Francisco Bay turbidity?

There is no evidence that significant cumulative impacts currently exist relative to risk from flooding or excessive runoff that could cause increased turbidity of the Bay as a result of the Proposed Project. However, the 2002 EIR as Addended found that in-water construction activities associated with the OAB Area Redevelopment Plan, along with other nearby construction or remediation projects, could substantially increase turbidity, resulting in a cumulative significant impact. The 2002 EIR as Addended also identified that increases in erosion and sedimentation/turbidity could represent a significant contribution to this impact. However, with implementation of Mitigation Measures 4.15-1 and 4.15-2 in the 2002 EIR as Addended, this impact was determined to be less than significant. Under the Proposed Project, implementation of SCA GEO-1, SCA HAZ-1, and compliance with Port policies requiring a Small Project SWPPP (which supersedes Mitigation Measures 4.15-1), Provision F.5.g of the Port's Phase II MS4 Permit (Order No. 2013-0001-DWQ), the Port's 2015 PCSDM, and the HDS ~~and retention pond BMPs~~, the Proposed Project's contribution would be less than cumulatively considerable. Furthermore, the Proposed Project would not require in-water construction. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** cumulative impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

4.6.5 Noise

Cumulative Impact NOI-1: Would the Proposed Project result in a cumulative increase in ambient noise levels above 5 dBA?

Implementation of the Proposed Project would not result in any new construction noise impacts or substantially increase the severity of the previously identified construction noise impacts. Therefore, there is no change to the overall contribution of the OAB Area Redevelopment Plan to the cumulative construction noise impacts, and the conclusions provided in the 2002 EIR as Addended for cumulative noise impacts remain valid. With the Port, BART, railroads, and major roadways projected to increase in activity and the ambient noise levels already above the suggested land use compatibility levels, the analysis determined that there would be a substantial cumulative increase above these ambient levels. As noted above, with growth the noise levels could cause a cumulative 3 dBA noise increase from non-Project sources. However, as discussed in Section 3.10, "Noise," the Proposed Project would not result

[24] Stormwater treatment system to follow Basic Treatment per the Washington Department of Ecology Technology Assessment Protocol – Ecology (TAPE): https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies.

in an increase in operational noise; therefore, the Proposed Project's contribution to any cumulative noise impact would not be cumulatively considerable. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** cumulative impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

4.6.6 Transportation

Cumulative Impact TRANS-1: Would the Proposed Project contribute to cumulative congestion impacts on area roadways?

The 2002 EIR as Addended determined that the OAB Area Redevelopment Plan would have significant and unavoidable cumulative impacts at multiple intersections and on local freeway segments due to the addition of trucks and employee passenger vehicles supporting the industrial uses in the OAB Redevelopment Area to past, present, and probable future projects. The Proposed Project would result in a potentially significant impact to congestion at the intersection of Maritime Street and 17th Street; however, implementation of Mitigation Measure ERA TRANS-1 would reduce this congestion impact to a less-than-significant level. Thus, implementation of the Proposed Project would not result in any other new construction or operation transportation impacts. The Proposed Project would generate fewer passenger vehicles and trucks compared to a container terminal on the same site, and therefore would not increase the severity of the previously identified impacts. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **significant and unavoidable** cumulative impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

4.6.7 Utilities

Cumulative Impact UTL-1: Would the Proposed Project contribute to a cumulative impact on water supplies from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities?

The Proposed Project would not result in any new or more significant cumulative impacts related to water supply and service than were described in the 2002 EIR as Addended. The Proposed Project operational water needs would primarily be sourced from pumped water from the self-unloading OGV ship holds and additionally by EBMUD recycled water when ~~accumulated runoff from the site's stormwater retention pond as~~ needed. Water from these sources would be stored in ~~20~~ an on-site water storage tank~~s, each~~ with a ~~10,000~~one-million-gallon capacity~~,~~ on the north side of the Ship Unloading Hopper. Thus, by primarily relying on ~~primarily reused~~OGV ship hold water and recycled water during operation, the Proposed Project would not exceed available water supplies or result in construction of water facilities or expansion of existing facilities. Therefore, the Proposed Project would not result in a cumulatively considerable contribution. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** cumulative impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

Cumulative Impact UTL-2: Would the Proposed Project contribute to a cumulative impact on a wastewater treatment provider and require or result in construction of new wastewater treatment facilities or expansion of existing facilities?

The 2002 EIR as Addended concluded that there would be less-than-significant impacts with regard to increased sewer flows (Impact 4.9-9). Sewer flows for the Proposed Project would be consistent with a typical office building, which, for eight employees, would be approximately up to 200 GDP (~~U.S.~~

~~Environmental Protection Agency [~~USEPA~~]~~ 2019) and existing sanitary sewer lines are available near the scale house. Additionally, runoff from the adjacent truck tire wash system(s) would be discharged to the sanitary system at up to 18,000 GPD. East Bay Municipal Utility District's ~~EBMUD's~~ MWWTP average annual daily flow to the MWWTP is approximately 54 MGD (EBMUD 2016). Thus, EBMUD would have adequate capacity to serve the Proposed Project and the Project would not have a cumulatively considerable contribution. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** cumulative impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

Cumulative Impact UTL-3: Would Proposed Project contribute to a cumulative impact on landfill permitted capacity?

During construction, approximately 14 percent of asphalt pavement would be crushed and reused on-site (under Mitigation Measure 4.9-8), while the remainder of construction debris would be recycled into the construction market (under Mitigation Measure 4.9-7), brought to local recycling centers, or disposed of at the Vasco Road Landfill or the Altamont Landfill and Resource Facility near Livermore. Once in operation, the Proposed Project would generate limited amounts of solid waste from personnel working at the scale house typical of an office building. As of 2016, the Vasco Road facility has a remaining capacity of 7,379,000 cy and is anticipated to have adequate solid waste disposal capacity through 2022 (California Department of Resources Recycling and Recovery [CalRecycle] 2019a). As of 2014, the Altamont facility had a remaining capacity of 65,400,000 cy and is anticipated to have adequate solid waste disposal capacity until at least 2025 (CalRecycle 2019b). The Proposed Project, in conjunction with past, present, and probable future projects, could result in a cumulative increase in solid waste and debris generated by Project construction and operations. However, through implementation of SCA UTL-2, it would comply with applicable local management and reduction regulations related to solid waste, which support the 50 percent waste reduction goal mandated by state law (AB 939). Thus, there is adequate facilities to handle the Proposed Project landfill needs and reasonably foreseeable past, present and probable future needs. The Proposed Project would not result in a cumulatively considerable contribution. Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified cumulative impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended, which was **less than significant with mitigation.**

Cumulative Impact UTL-4: Would the Proposed Project contribute to a cumulative impact on energy and natural gas capacity?

For electrical and natural gas services, the geographic scope for assessing cumulative impacts encompasses PG&E's northern and central California service area. Despite annual statewide increases in energy consumption, the net increased energy demand generated by the Proposed Project, combined with other past, present, and probable future projects, would not result in a significant cumulative impact. Urbanized portions of City are already served by gas and electricity infrastructure, and the net increased energy demand from probable future projects, relative to the regional service area, would be minimal and would not require expanded or new energy facilities as a direct result of Project development.

PG&E produces much of its energy from renewable sources and has plans in place to increase reliance on renewable energy sources. Because many agencies in California, including the City and the Port, have adopted policies seeking increased use of renewable resources (and have established minimum standards for the provision of energy generated by renewable resources), it is expected that the Port and PG&E would continue to meet future demand for energy via increasing reliance on renewable resources.

The Proposed Project would not result in any new or more significant cumulative impacts related to energy services**.** Therefore, the Proposed Project would not increase the severity of, or result in a change in, the previously identified **less-than-significant** impact of the OAB Area Redevelopment Plan disclosed in the 2002 EIR as Addended.

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Chapter 5
Alternatives

5.1 INTRODUCTION

The purpose of the alternatives analysis in an EIR is to describe a range of reasonable alternatives to the Proposed Project that can feasibly attain most of the identified Proposed Project objectives, but would reduce or avoid one or more of the Proposed Project's significant impacts. In accordance with Section 15126.6 of the CEQA Guidelines, this chapter describes alternatives to the Proposed Project that were considered and evaluated for their potential environmental impacts.

CEQA requirements for consideration of alternatives are presented below. The chapter then continues with a description of considerations for the alternatives' development process, alternatives that were considered, and alternatives that were initially considered but dismissed from detailed analysis. The chapter concludes with identification of the environmentally superior alternative.

5.2 CEQA REQUIREMENTS FOR ALTERNATIVE EVALUATION

CEQA requires that an EIR evaluate a reasonable range of alternatives to a Proposed Project, including an alternative where no project would be developed. The No Project Alternative allows decision-makers to compare the impacts of approving the proposed action against the impacts of not approving the action. Although no clear rule exists for determining a "reasonable range," CEQA provides guidance that can be used to define the range of alternatives for consideration in the environmental document.

First, the range of alternatives under CEQA is governed by the "rule of reason," which requires the EIR to examine only alternatives that could feasibly attain most of the Project's objectives and would avoid or substantially lessen one or more of the significant environmental impacts of the Project, although the alternative could have greater impacts overall. The range of feasible alternatives should be selected and presented in a manner that will foster public participation and informed decision making (CEQA Guidelines Section 15126[f]). In determining whether alternatives are feasible, lead agencies are guided by the general definition of feasibility found in CEQA Guidelines Section 15364: "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

In accordance with CEQA Guidelines Section 15126.6[f][1], the Lead Agency must consider site suitability, economic viability, availability of infrastructure, general plan consistency, other regulatory limitations, jurisdictional boundaries, and the proponent's control over alternative sites in determining the range of alternatives to be evaluated in an EIR. An EIR must briefly describe the rationale for selection and rejection of alternatives and the information that the lead agency relied on in making the selection. It should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process, and briefly explain the reason for their exclusion (CEQA Guidelines Section 15126[d][2]).

5.3 ALTERNATIVE DEVELOPMENT PROCESS

Alternatives were developed and evaluated for their feasibility, their ability to meet most of the Project objectives, and their ability to reduce the severity of one or more significant impacts of the Proposed Project. Alternatives that were determined to be infeasible, that failed to meet most of the basic Project objectives, or that failed to reduce at least one of the potentially significant impacts of the Proposed Project were removed from further evaluation. The Proposed Project purpose and objectives and significant impacts of the Proposed Project are presented next because these factors were fundamental to the evaluation of the alternatives.

5.3.1 Project Purpose and Objectives

The Proposed Project would assist in meeting current and projected needs for sand and gravel supply in the greater Bay Area. Sand and gravel are necessary components for concrete, asphalt, and other construction materials (e.g., concrete blocks, bricks, and pipes), which are used in nearly all construction projects and activities in the Bay Area, including housing, infrastructure, commercial development, seismic retrofitting, and other improvements. Sand and gravel, in addition to dry concrete additives such as bauxite, slag, and gypsum (also used in sheetrock), comprise the majority of the construction-related dry bulk cargo handled through other Bay Area ports; these materials are not currently handled at the Port. The amount of construction-related dry bulk cargo imported to Bay Area ports is dependent on both the construction needs of the region (demand) and the production capacity of regional and national mines (i.e., domestic supply delivered by haul truck or rail). In its Draft Final 2019-2050 Bay Area Seaport Forecast, BCDC states that California has only approximately 69 percent of the construction aggregates resources needed to meet demand over the next 50 years. BCDC's forecast anticipates that the share of imported and harvested sand and gravel will increase to 30 percent of California's annual demand by 2050 compared to approximately 8.1 percent in 2018 (Tioga Group 2020).

As described in the 2002 EIR, the primary purpose of the OAB Area Redevelopment Plan is to revitalize the 1,800-acre redevelopment area to eliminate blight and blighting influences resulting from the closure of the Oakland Army Base and strengthen the economic base in West Oakland. As Port facility modernization evolves, facility improvements to specific facilities are considered in light of redevelopment objectives during project-level approval and environmental review. The Proposed Project would be consistent with several redevelopment objectives for the OAB Area Redevelopment Plan including:

- Strengthen the economic base
- Allow for sustainable job creation
- Provide for safe, efficient, and effective movement of people and goods
- Respond to trends and requirements of maritime shipping
- Increase Port productivity and efficiency
- Keep competitive with other West Coast ports

The Proposed Project objectives, which support implementation of the OAB Area Redevelopment Plan objectives, are to:

- Accommodate the Port's share of regional cargo throughput and respond to trends and requirements of maritime shipping;
- Provide a beneficial cargo use of the Proposed Project site until such time that the Port required the additional capacity for container cargo;
- Strengthen the economic base of the Bay Area by establishing a construction aggregates storage and distribution terminal at the Port; and
- Provide for safe, effective, and efficient movement of aggregate materials to assist in meeting Bay Area construction supply needs.

Benefits of utilizing the Proposed Project site include a more centralized Bay Area location for efficient distribution to customers when compared to current operations from the Applicant's Richmond Marine Terminal; sufficient water depth to berth fully-loaded OGVs and eliminate the need for anchorage transfer of materials (i.e., lightering[25]) prior to berthing; reduced shipping times; close proximity to freeways; and the available space for construction aggregates storage.

5.3.2 Significant Environmental Impacts of the Proposed Project

For the purpose of identifying potential alternatives to the Proposed Project, the significant environmental impacts identified below focus only on the Proposed Project, and not those impacts associated with the OAB Redevelopment Plan as modified by the Proposed Project.

The following Proposed Project impacts would be below the respective thresholds of significance with the implementation of mitigation measures:

- The Proposed Project would create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area;
- The Proposed Project would expose sensitive receptors to substantial pollutant concentrations including:
    i. Substantial levels of TACs, such that the probability of contracting cancer for the MEI exceeds 10 in one million;
    ii. Ground level concentrations of non-carcinogenic TACs such that the Hazard Index would be greater than 1 for the MEI;

[25] Lightering is the process where OGVs load barges at anchorages to lighten their load and reduce their draft, enabling them to access port facilities that cannot accept large, fully-loaded OGVs due to shallow draft ports, narrow entrances, or small berths.

- The Proposed Project would result in a substantial increase in diesel emissions;
- The Proposed Project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, or be another known or suspected contaminated site that would create a significant hazard to the public or the environment;
- The Proposed Project would generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts;
- The Proposed Project would generate noise in violation of the City nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise;
- The Proposed Project would cause an increase in traffic which would cause the existing or future baseline level of service (LOS) to degrade to worse than LOS D (i.e., E) at a signalized intersection, which is located outside the Downtown area (Maritime Street and 17th Street intersection);
- The Proposed Project would be served by a landfill with insufficient permitted capacity to accommodate the redevelopment program's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects. The Proposed Project would violate applicable federal, state, or local statutes and regulations related to solid waste; and
- The Proposed Project would contribute to a cumulative impact on landfill permitted capacity.

The following Proposed Project impacts would exceed air quality thresholds of significance even with mitigation:

- The Proposed Project would result in construction emissions or total operational emissions exceeding BAAQMD recommended NOx thresholds of 15 tons per year or greater or 80 pounds per day or greater;
- The Proposed Project would conflict with or obstruct implementation of the applicable air quality plan (due to NOx and PM2.5 concentration at MEIW);
- The Proposed Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation (due to NOx and PM2.5 concentration at MEIW);
- The Proposed Project would result in a cumulatively considerable net increase of NOx and PM2.5 for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors); and
- The Project would result in a cumulative exposure of sensitive people to substantial pollutant concentrations.

5.4 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL IN THE ~~DRAFT~~ FINAL SEIR

The following alternatives were considered but were dismissed from further evaluation for one or more of the following reasons: (1) they were not substantively different from one of the considered alternatives; (2) they would not sufficiently meet most of the Project objectives; (3) they were determined to be infeasible; or (4) they would not avoid or substantially reduce one or more potentially significant impacts under the Proposed Project. These alternatives and the reasons why they were dismissed from further review are described next.

- Covered Conveyors
- Covering Stockpiles with Tarps
- Shore Power
- Emission Capture and Control System
- Smaller Project Footprint (Reduced Throughput)
- Alternative Location in the Seaport

5.4.1 Covered Conveyors

This alternative would involve installing covers or shields over the conveyor belts to prevent the release and migration of PM10 and PM2.5 emissions from the aggregate materials during their transfer between the ship unloading hopper and stockpile, or between stockpile and barge.

Covering the conveyor system would provide little to no benefit for reducing dust emissions given that aggregate material would already be wet upon being loaded to the conveyor (or of sufficient moisture content to eliminate substantial dust generation), and would mostly remain in a static position while on the conveyor belts. Dust emissions would occur at transfer points as the aggregate material drops from one conveyor to another and is already designed to have covered enclosed chutes. Additionally, sprinklers would be located at points along the conveyor system at conveyor transfer points to ensure adequate dust suppression. As such, the use of covered conveyors would not further reduce PM10 and PM2.5 emissions associated with the Proposed Project. This alternative was not carried forward for detailed analysis.

5.4.2 Covered Stockpiles with Tarps

This alternative would consist of covering the aggregate material stockpiles with the mostly likely option being tarps. Keeping the stockpiles covered with tarps could be an effective means of reducing windblown migration of PM10 and PM2.5; however, this alternative was found to be infeasible for the following operational and safety reasons:

- Operationally, the tarps would require frequent removal and replacement making them ineffective at reducing PM10 and PM2.5. The tarps would need to be completely removed during the offloading of construction aggregates from OGVs. Further, during hours of operation the regular demand for construction aggregates would also require the stockpiles be at least partially uncovered to load materials into trucks or onto the barge conveyor system. As the stockpiles dwindle in size during course of normal operations, the tarps would be too large and would physically obstruct other activities. Irrigation of stockpiles to maintain moisture content would not be possible while covered by tarps.

- The use of tarps on the stockpiles poses safety challenges to site workers and operations. Tarps large enough to cover up to 103,000 metric ton stockpiles (each roughly 2 acres in size) would require cables and anchoring and could pose a safety risk to workers during periods of high winds. Damaged tarps could also compromise the proper operation of the conveyor system, causing mechanical failure and other safety issues. Additional permanent staff and equipment would be necessary to manage the tarps and to ensure safety.

As such, the use of tarps was eliminated as a viable alternative and not carried forward for detailed analysis.

5.4.3 Shore Power

In this alternative, all OGVs calling the Proposed Project site would use shore power for hoteling and to discharge loads while the vessel is at berth as a means of reducing NOx and diesel emissions and potential corresponding health impacts. This alternative would require installation of shore power infrastructure at Berth 22 as well as modification of the OGV's to accommodate the use of shore power in place of the power currently provided by onboard auxiliary engines.

Evaluation of this alternative concluded that it was logistically and financially infeasible. The Applicant does not have its own ships and instead has a long-term contract with an outside bulk carrier service to deliver its construction aggregates to its various ports of call on one of six OGVs (note that there are no individual OGVs dedicated to Bay Area ports of call). Bulk carriers are not currently regulated for shore power, and there are currently no bulk carriers with plug in capability to take advantage of shore power. Logistically, the OGV carrier retains the authority to change out or upgrade its vessels (three of the six vessels currently in use would be in service for up to ten more years[26]). Over time, OGVs may be retrofitted by the carrier or aged out and replaced with new OGVs with shore power capabilities; however, the timing of this is not controlled by the Applicant. Therefore, it would be speculative and logistically infeasible to rely on future OGV conversions or replacements when the timing is unclear and there are not specific OGVs dedicated to call the Proposed Project.

The option of the Applicant purchasing its own ships was considered but was found to be financially infeasible. A total of at least two OGVs would be required. The cost to purchase two OGVs would be approximately $150,000,000, which is more than five times the capital cost for the Proposed Project. On top of this cost, shoreside power supply upgrades add another $5,000,000 to $10,000,000 in

[26] Note that three typical vessels owned by the carrier were identified and included in the project description to provide a basis for impact analysis.

implementation costs. The substantial financial hurdle of this option makes it financially infeasible as a viable alternative to the Proposed Project.

As such, the use of shore power was eliminated as a viable alternative and not carried forward for detailed analysis.

5.4.4 Emission Capture and Control System

In this alternative, OGVs calling the Proposed Project site would use an emission capture and control system while at berth to reduce overall Project emissions. This alternative would entail equipment installed either shore side or on a barge that would capture and scrub emissions from the OGV using a bonnet over the vessel exhaust stack. This alternative could reduce emissions of DPM, PM2.5, NOx, and ROG.

Evaluation of this alternative concluded that it was infeasible. Although there are currently two demonstration pilot projects in California utilizing emission capture and control systems, the systems are still undergoing reporting and evaluation for efficacy. No known equipment is available that has been certified by CARB or identified as being compatible and effective on the vessels like those under contract with the Applicant. Thus, it is anticipated that such a system would need to be designed and constructed due to lack of commercial availability, and the potential benefits of using a capture and control system are speculative. It is also possible that operation of such a system could result in potential additional emissions; for example, from tugs if used to maneuver the system in place for operations and storage. The estimated cost (between $5,000,000 and $10,000,000) may be financially feasible depending on the life of the control system and annual operating costs which are unknown at this time.

As such, the use of an emission capture and control system as an alternative to reduce Proposed Project emissions was found to be infeasible at this time due to lack of demonstration in practice, technical feasibility, and potential cost effectiveness. It should be noted, however, that the Applicant, in coordination with the Port, is exploring the viability of a pilot project to determine if such technology could be feasible for the Proposed Project site in the future.

5.4.5 Smaller Project Footprint (Reduced Throughput)

This alternative contemplates a reduced construction aggregate throughput at the Project site as a means of reducing Proposed Project emissions of NOx and PM2.5. The Proposed Project is intended to relocate and consolidate the Applicant's aggregate materials sales and distribution from the Port of Richmond and Anchorage 9 to the Port of Oakland, thereby providing more efficient movement of aggregate materials to facilities that need it, and eliminating the need for Anchorage 9 as a lightering transfer point. The Proposed Project total annual maximum throughput would be 2,500,000 tons. This would include the transfer of 1,500,000 tons currently routed through the Port of Richmond and approximately 700,000 tons routed via Anchorage 9, while providing for additional growth (roughly 15%) of another approximately 300,000 tons with the available space at the Project site. A reduced throughput could achieve reduced NOx emissions if it reduced the number of OGV calls to below the 48 calls associated with the Project site. For example, a reduction of 200,000 tons could reduce upwards of 3 OGV calls and the associated NOx emissions. NOx would also be reduced by a corresponding reduction in haul truck trips to and from the Project site. However, reducing the throughput would not

substantively change the localized PM2.5 emissions, which are tied to windblown migrating dust from the on-site stockpiles. In addition, the reduction in throughput at the Port of Oakland would not preclude aggregate materials continuing to be sold out of other locations, such as the Port of Richmond and Anchorage 9. This would result in less efficient movement of aggregate materials with increased OGV and haul truck distances, and corresponding air emissions that would counter the Project site benefits of reducing throughput.

Furthermore, the Applicant has indicated that a reduced throughput scenario would be a non-starter for use of the Project site at the Port of Oakland because it would not make economic sense to relocate their operations and front the capital costs to develop a facility without a reasonable degree of growth to justify their investment. Without that benefit, existing operations would continue with aggregate materials routed through the Port of Richmond and Anchorage 9.

This alternative is not economically feasible, would not meet the Proposed Project objectives, and would not provide substantive emissions reductions; therefore, it was not carried forward for detailed analysis.

5.4.6 Alternative Location in the Seaport

Locating the Proposed Project in another part of the Seaport that is further from residential areas than the proposed Project site could reduce community exposure to Proposed Project emissions. An alternative location would require an available berth with adequate water depth and directly adjacent backlands of sufficient size to accommodate the facility infrastructure. There are unused berths at two locations with potentially sufficient depth and backlands:

- Outer Harbor terminals south of the Proposed Project site. These terminals are the same distance from residential areas as the Proposed Project site and would therefore not reduce community exposure. In addition, they are currently occupied by longer-term tenants.

- Howard Terminal on the Inner Harbor. This terminal is closer to residential areas than the Proposed Project site and would therefore not reduce community exposure. In addition, the Howard Terminal facility is not currently available because the Board of Port Commissioners approved an Exclusive Negotiation Agreement with the Oakland Athletics on May 13, 2019, that terminates on the earlier of four years from commencement date of the agreement or full execution of an option agreement with the Oakland Athletics.

5.5 ALTERNATIVES EVALUATED IN THE ~~DRAFT~~ FINAL SEIR

One alternative, enclosing the stockpiles within a building, is evaluated below in addition to the No Project Alternative. No other potentially feasible alternatives were identified that would meet most project objectives and avoid or substantially lessen one or more of the significant environmental impacts of the Proposed Project.

5.5.1 Alternative 1 – Stockpile Storage in a Building

ALTERNATIVE DESCRIPTION

Alternative 1 involves construction of a warehouse style building on-site in order to reduce PM2.5 emissions (i.e., dust) from the transfer and movement of construction aggregates on the site. The building would enclose the approximately 14 acres occupied by the three stockpiles, conveyor system, and truck loading operations. Baghouses, which collect and filter dust, would be installed on the building to capture and reduce the PM dust emissions vented from the building. The building dimensions would be approximately 1,300 feet long by 475 feet wide (approximately 617,500 square feet – roughly the size of 10 football fields). The building would also be approximately 50 feet or 4 stories tall to provide the necessary vertical clearance for the stockpiles.

IMPACT ANALYSIS

The primary difference in impacts between Alternative 1 and the Proposed Project would be with respect to construction and operational air quality impacts as discussed below. No other new significant impacts are anticipated from the construction and operation of Alternative 1.

AIR QUALITY

Construction

Construction of Alternative 1 would likely have daily air emissions comparable to the Proposed Project; however, Alternative 1 would require construction over a longer period than the Proposed Project. Impacts would likely be less than significant. Similar to the Proposed Project, Alternative 1 would be required to implement SCA AIR-1: Construction Management Plan and SCA AIR-2: Construction-Related Air Pollution Controls (Dust and Equipment Emissions).

Operations

Air emission impacts associated with site operations under Alternative 1 would be similar to that of the Proposed Project, except for PM2.5. The enclosure of the site operations within a building under Alternative 1 with baghouses would capture and eliminate nearly all the localized migration of PM2.5 resulting from dust.

5.5.2 Alternative 2 – No Project Alternative

ALTERNATIVE DESCRIPTION

Under the No Project Alternative, the Port would continue to use the Proposed Project site for ancillary maritime services while pursuing a tenant to operate the terminal for container cargo operations. It is assumed that the No Project Alternative would result in use of the site for container cargo operations. Therefore, the No Project Alternative would include vessel calls to deliver or pick up containers; use of cargo handling equipment; and trucks or rail to carry containers in and out of the Seaport, similar to operations at other Port terminals. Section 3.4, "Air Quality ~~Analysis~~", presents an alternative baseline scenario describing an upper and lower bound scenario on the potential vessel calls, use of cargo handling equipment and truck and rail activity, along with emission estimates. Vessel calls would range from 57 to 84 calls per year which is greater than the 48 vessel calls estimated for the Proposed Project;

however, the Proposed Project will have additional barge calls. Container vessels would be required to comply with the CARB at-berth regulation (shore power); construction aggregate bulk cargo vessels would not. The number of annual total trips by drayage trucks in the No Project Alternative (approximately 110,094 one-way trips under the high scenario) would be less than the number of annual total trips for Proposed Project trucks (approximately 140,000 one-way trips). The Proposed Project would have additional fugitive dust emissions associated with the conveyance and storage of the aggregate and sand.

IMPACT ANALYSIS

The No Project Alternative would include container cargo operations consistent with those described in the 2002 EIR as Addended. The differences in severity of impacts between the Proposed Project and the No Project Alternative are discussed for the following resources: air quality and traffic.

AIR QUALITY

Under both the Proposed Project and the No Project Alternative, the impacts from operational emissions would be significant and unavoidable due to NOx emissions that exceed the BAAQMD significance thresholds. The NOx emissions for both the Proposed Project and No Project Alternative would be primarily from fossil-fueled mobile sources including OGVs, tugs, off-road equipment, trucks, and locomotives. The peak PM2.5 ambient air concentration impact calculated for the Proposed Project is driven by on-site fugitive dust from aggregate transfer, storage piles, and on-site vehicle traffic, and is calculated to only exceed the BAAQMD significance threshold on Port property. The Proposed Project would have fewer OGV visits and less tug activity compared to the No Project Alternative because container operations would result in more ship calls. As shown in Section 3.4, the container terminal emissions are predicted to be similar to or greater than the Proposed Project for NOx and PM from engine exhaust and tire and brake wear. PM emissions from dust sources were not analyzed for the container terminal scenario, but PM emissions from dust sources are expected to be greater for the Proposed Project as compared to the No Project Alternative. PM2.5 emissions would be below BAAQMD significance thresholds, but PM2.5 ambient air concentration was calculated to exceed the BAAQMD threshold for the MEIW. As shown in Section 3.4, this exceedance would be localized to Port property within the immediate vicinity of the Proposed Project and would not impact the West Oakland Community. The No Project Alternative would not reduce the severity of the NOx air quality impact.

The health impacts outlined in Section 3.4 show that mobile source fossil-fueled equipment including OGVs, tugs, and trucks would provide the largest DPM contribution to the long-term cancer risks. However, the use of shore power under the No Project Alternative would offset some of the DPM emissions resulting from transit, maneuvering, and tug activities. The DPM emissions of the upper and lower container terminal scenarios bound the Proposed Project DPM emissions. The effect to the HRA given the spatial distribution change in emissions (greater transiting but less hoteling) makes it difficult to determine if the No Project Alternative would result in an increase or decrease in the cancer risk compared to the Proposed Project without a more detailed analysis, which is beyond the scope required to evaluate the No Project Alternative.

The Proposed Project would have a new TAC associated with the construction aggregate material handling. The primary TAC of concern with construction aggregate is crystalline silica, which has a chronic non-cancer health impact. The chronic non-cancer hazard index in both the Proposed Project and the No Project Alternative is less than the BAAQMD significance threshold for chronic non-cancer health impacts. Details are not readily available to determine if there is any substantial difference

between the reduction in chronic non-cancer impacts from the possible reduction in DPM emissions versus the increase in crystalline silica.

TRAFFIC

The number of annual total trips by drayage trucks in the No Project Alternative (approximately 110,094 one-way trips under the high scenario) would be less than the number of annual total trips for Proposed Project trucks (approximately 140,000 one-way trips).

5.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Alternative 1 would be the environmentally superior alternative. While diesel and NOx emissions would be the same as the Proposed Project, Alternative 1 would eliminate the Proposed Project's significant and unavoidable impact of PM2.5 concentration at the location of the MEIW.

Evaluation of Alternative 1 concluded that it is financially infeasible as a result of the substantial costs (on the order of more than two times the Proposed Project costs) to design and construct a building with the necessary vertical and horizontal clearances compounded by extraordinary on-site geotechnical considerations, which are explained further below.

The building design would require customized horizontal clear span steel framing for the total width of the building in order to provide unimpeded enclosure space for project operations (conveyor operations, placement of the radial stockpiles, and haul truck loading), eliminating the presence of internal vertical building supports that would interfere with the movement and storage of construction aggregates within the building. The cost to design and construct such a structure at the size and scale required for the Proposed Project would be cost-prohibitive to the Applicant. For comparison, the nearby recently constructed CenterPoint Landing warehouse is a 440,880 square foot, three-story tall building that internally provides 36 feet of clear height, but requires columns spaced every 50 feet on center within the building for structural support. In comparison, the per-square-foot cost for the CenterPoint warehouse is anticipated to be $118.00. Using that as an initial cost basis, the starting cost to build a warehouse structure on the Project site would be $72,865,000, which would be over 2.5 times the capital cost for the Proposed Project. Note that this projected total cost does not account for the additional engineering and material costs necessary to address the Project's unique design needs, which would result in an even higher cost per square foot and total cost.

Further complicating the building design and total cost on the Project site are on-site geotechnical considerations. The Project site is underlain by fill that is expected to settle under the weight of the stored aggregates as described in Section 3.5, "Geology and Soils." Differential ground settlement would occur based on the presence and depth of young Bay mud deposits. For the Proposed Project, areas of settlement would be filled with stockpiled aggregates where such settlement would impact vehicle and truck access. Additionally, the proposed conveyor system equipment would be built on pile foundations and footings to counter the effects of ground settlement. Placing a 617,500 square foot building on the Project site would require the design and construction of a foundation system capable of withstanding site settlement that would result from enclosed stockpiles while supporting the load of a clear span structure without compromising structural integrity and worker safety. The details of what this foundation would look like are unknown at this time; however, the design and construction costs for a perimeter foundation supporting a free span structure are anticipated to be greater than the design and construction costs for a building foundation supporting a structure with internal vertical columns placed

every 50 feet to spread out the load weight of structure. A structure of this size and type would have significantly higher costs than a standard warehouse/distribution facility with a similar footprint due to the required height, large clear span, and foundation requirements to accommodate the Project operations and weight of the aggregate stockpile.

As such, the cost associated with designing and constructing a building of this magnitude creates a substantial financial hurdle that makes Alternative 1 infeasible to implement.

Chapter 6
Other CEQA Considerations

6.1 INTRODUCTION

This chapter describes other aspects and potential impacts of the Proposed Project that have not already been described, as required by CEQA Guidelines. This chapter includes a discussion of irreversible impacts, significant but mitigable impacts, and growth-inducing impacts.

6.2 IRREVERSIBLE IMPACTS

State CEQA Guidelines Section 15126.2(d) requires that an environmental impact report (EIR) must identify any irreversible impacts (also referred to as irreversible environmental changes) that may be caused by a proposed project, including current or future commitments to using non-renewable resources, secondary impacts, and growth-inducing impacts that commit future generations to similar uses. Section 15126 of the State CEQA Guidelines states that significant, irreversible environmental changes associated with a proposed project may include:

- uses of non-renewable resources during the initial and continued phases of the project that may be irreversible because a large commitment of such resources makes removal or non-use thereafter unlikely;
- primary impacts and, particularly, secondary impacts (such as a highway improvement that provides access to a previously inaccessible area) that commit future generations to similar uses; and
- irreversible damage that may result from environmental accidents associated with the project.

An irretrievable commitment of nonrenewable resources would occur as a result of the Proposed Project. Implementation of the Proposed Project would include the construction and operation a bulk construction aggregates (i.e., sand and gravel) import, storage, and distribution marine terminal at the Port. These activities would require the use of heavy equipment and fossil fuels, and would involve the permanent use of raw materials, including nonrenewable resources. The term of ERA's lease from the Port for the Project site would be approximately twelve (12) years with a 10-year option followed by a~~three~~ five-year option~~s~~ to extend, for a total of twenty-seven (27) years. Thus, the Proposed Project is not anticipated to have secondary impacts that would commit future generations to similar uses or result in irreversible damage nor would it involve expansion of existing facilities.

6.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Section 15126.2(c) of the CEQA Guidelines further requires an EIR to describe any significant impacts that cannot be mitigated to a level of insignificance. The Proposed Project impacts identified below

would exceed the respective thresholds of significance with the implementation of mitigation measures. The Proposed Project would result in three significant and unavoidable impacts related to air quality and two cumulatively significant and unavoidable impacts related to air quality. Refer to Section 3.~~3~~4, "Air Quality" and Section 4.6, "Cumulative Impacts" for a full description of these impacts:

- The Proposed Project would result in construction emissions or total operational emissions exceeding BAAQMD recommended NOx thresholds of 15 tpy or greater or 80 pounds per day or greater;
- The Proposed Project would conflict with or obstruct implementation of the applicable air quality plan (due to NOx and PM2.5 concentrations at MEIW);
- The Proposed Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation (due to NOx and PM2.5 concentrations at MEIW);
- The Proposed Project would result in a cumulatively considerable net increase of NOx and PM2.5 for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors); and
- The Proposed Project would result in a cumulative exposure of sensitive people to substantial pollutant concentrations.

The impacts identified below for the OAB Area Redevelopment Plan as modified by the Proposed Project would exceed the respective thresholds of significance with the implementation of mitigation measures. Per the Proposed Project redevelopment area and as disclosed in the 2002 EIR as Addended, the OAB Area Redevelopment would still result in five significant and unavoidable ~~impacts~~ air quality impacts, one significant and unavoidable transportation impact, and two cumulatively significant and unavoidable air quality impacts. Refer to Section 3.~~3~~4, "Air Quality," Section 3.11, "Transportation," and Section 4.6, "Cumulative Impacts" for a full description of these impacts:

- The Project would result in construction emissions or total operational emissions exceeding BAAQMD recommended thresholds of ROG, NOx, or PM10 of 15 tons per year or greater or 80 pounds per day or greater;
- The Project would expose sensitive receptors to substantial pollutant concentrations including:
    i. Substantial levels of TACs, such that the probability of contracting cancer for the MEI exceeds 10 in one million;
    ii. Ground level concentrations of non-carcinogenic TACs such that the Hazard Index would be greater than 1 for the MEI;
- The Project would conflict with or obstruct implementation of the applicable air quality plan (due to NOx and PM2.5 concentrations at MEIW);
- The Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation (due to NOx and PM2.5 concentrations at MEIW);

- The Project would result in a substantial increase in diesel emissions;
- The Project would result in a cumulatively considerable net increase of NOx and PM2.5 for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- The Project would result in a cumulative exposure of sensitive people to substantial pollutant concentrations; and
- The Project would cause a roadway segment on the Metropolitan Transportation System (MTS) to operate at LOS F or increase the V/C ratio by more than three (3) percent for a roadway segment that would operate at LOS F without redevelopment.

6.4 GROWTH INDUCEMENT

Section 15126.2(e) of the State CEQA Guidelines requires an EIR to include a detailed statement of a proposed project's anticipated growth-inducing impacts. The analysis of growth-inducing impacts must discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing in the project area. The analysis also must address project-related actions that, either individually or cumulatively, would remove existing obstacles to population growth. A proposed project is considered growth inducing if it induces growth directly (through the construction of new housing or increasing population) or indirectly (increasing employment opportunities or eliminating existing constraints on development). Under CEQA, growth is not assumed to be either beneficial or detrimental.

The Proposed Project would neither involve the construction of new housing nor directly result in population growth. Similarly, the Project would remain a maritime use and would not result in substantial increases in employment or economic growth beyond that projected in the 2002 EIR as Addended. Therefore, the Proposed Project would not result in any new growth inducing impacts.

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Chapter 7
Report Preparation

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Chapter 6. Other CEQA Considerations

None.