2012 OAKLAND ARMY BASE PROJECT
INITIAL STUDY / ADDENDUM

LSA

May 2012

2012 OAKLAND ARMY BASE PROJECT INITIAL STUDY / ADDENDUM

Submitted to:

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LIST OF ACRONYMS

AAQS	ambient air quality standard (California: CAAQS; National: NAAQS)
ABAG	Association of Bay Area Governments
ACM	asbestos containing material
AC Transit	Alameda County Transit Authority
AHERA	Asbestos Hazard Emergency Response Act
AHM	acutely hazardous material
ALUC	Airport Land Use Commission of Alameda County
ALUPP	Airport Land Use Policy Plan
AMS	ancillary maritime support
API	Area of Primary Importance
ARB	California Air Resources Board
Army	U.S. Army
ASI	Area of Secondary Importance
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit District
Base	Oakland Army Base (also OARB)
BCDC	Bay Conservation and Development Commission
bgs	below ground surface
BLS	basic life support
BMP	best management practice
BRAC	Base Realignment and Closure
BTEX	benzene, toluene, ethylbenzene, and xylene
CAA	Clean Air Act
CAAQS	California ambient air quality standards
Cal/EPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CBD	Central Business District
CCAA	California Clean Air Act

CCMP	California Coastal Management Program
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Responsibility, Compensation, and Liability Act
CFR	Code of Federal Regulations
City	City of Oakland
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
Corps	(U.S.) Army Corps of Engineers
CRHR	California Register of Historic Resources
CRL	Community Redevelopment Law
CRUP	Covenant to Restrict Use of Property
CUPA	Certified Unified Agency Programs
CWA	Clean Water Act
CY	cubic yards
CZMA	Coastal Zone Management Act
dB	decibels
dBA	A-weighted decibels
DDT	dichloro-diphenyl-trichloroethane
DERP	Defense Environmental Restoration Program
district	Oakland Army Base area redevelopment district (also project area)
DOD	(U.S.) Department of Defense
DPW	Department of Public Works
DTSC	(California) Department of Toxic Substances Control
DWR	(California) Department of Water Resources
EBMUD	East Bay Municipal Utility District
EBRPD	East Bay Regional Park District
EBS	Environmental Baseline Survey
EDD	(California) Employment Development Department
EEZ	Exclusive Economic Zone

EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMT	Emergency Medical Technician
EPA	(U.S.) Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
ESA	Endangered Species Act
ESG	Emergency Shelter Grant
FAR	Floor-to-area ratio
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FISCO	Fleet Industrial Supply Center, Oakland
FOST	Finding of Suitability to Transfer
FOSET	Finding of Suitability to Early Transfer
GPG	General Plan Guidelines
HCD	(California Department of) Housing and Community Development
HMTA	Hazardous Materials Transportation Act
HOPWA	Housing Opportunities for People with AIDS
HSC	Health and Safety Code
HUD	(U.S. Department of) Housing and Urban Development
HWCA	(California) Hazardous Waste Control Act
I-	Interstate
IBC	International Building Code
IEC	Interurban Electric (railway bridge)
JATC	Joint Apprentice and Training Committee
JIT	Joint Intermodal Terminal
kV	kilovolt
LBP	lead-based paint
L_{dn}	day/night average sound level
L_{eq}	equivalent sound level
LOS	level of service
LRA	Local Reuse Authority
LTMS	Long Term Management Strategy
LUTE	Land Use and Transportation Element (of the Oakland General Plan)
ìmho/cm	micromho per centimeter

MCL	maximum contaminant level
MEI	maximally exposed individual
mg/L	milligrams per liter
MHW	mean high water
MLLW	mean lower low water
MOA	Memorandum of Agreement
MOIA	Metropolitan Oakland International Airport
MOU	Memorandum of Understanding
mph	miles per hour
MSC	Maritime Support Center
msl	mean sea level
MTBE	methyl tertiary ethyl
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
NAAQS	National ambient air quality standards
NAS	Naval Air Station (Alameda)
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NISA	National Invasive Species Act
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOA	Notice of Availability
NOC	Notice of Completion
NOD	Notice of Determination
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NWP	nationwide permit
O_3	ozone
OARB	Oakland Army Base (also Base)
OBRA	Oakland Base Reuse Authority

OHP	(California) Office of Historic Preservation
OMC	Oakland Municipal Code
OPR	(Governor's) Office of Planning and Research
ORA	Oakland Redevelopment Agency
OSCAR	Open Space, Conservation, and Recreation (Element of the Oakland General Plan)
OSHA	Occupational Safety and Health Administration
OSH Act	Occupational Safety and Health Act (also Cal/OSH Act)
OUSD	Oakland Unified School District
OWS	oil/water separator
PBC	Public Benefit Conveyance
PCBs	polychlorinated biphenyls
PG&E	Pacific Gas and Electric Company
P.L.	Public Law
PM	particulate matter
PM_{10}	particulate matter with a diameter less than 10 microns
$PM_{2.5}$	particulate matter with a diameter less than 2.5 microns
Port	Port of Oakland
ppm	parts per million
PRC	Public Resources Code
RAO	remedial action objective
RAP/RMP	Remedial Acton Plan/Risk Management Plan
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
Reserves	U.S. Army Reserves
RHND	Regional Housing Needs Determination
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SFEP	San Francisco Estuary Project
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLC	State Lands Commission
SLM	sound level meter
SO_2	sulfur dioxide
SPRR	Southern Pacific Railroad

SR-	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	(California) State Water Resources Control Board
TAC	toxic air contaminant
TCE	trichloroethelyne
TDS	total dissolved solids
TEU	twenty-foot equivalent unit
TPH	total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
UBC	Uniform Building Code *[the UBC has since been replaced by the International Building Code (IBC)]*
ULR	Urban Land Redevelopment
UP	Union Pacific (railroad)
USC	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
VOC	volatile organic compound
WDR	waste discharge requirements
WOCA	West Oakland Commerce Association
WOCAG	West Oakland Community Advisory Group
WQOs	water quality objectives
WWTF	wastewater treatment facility (also wastewater treatment plant)
WWTP	wastewater treatment plant (also wastewater treatment facility)

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1.0 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY/ADDENDUM

The purpose of this evaluation is to determine whether a Subsequent or Supplemental Environmental Impact Report (EIR) is needed to fully assess and evaluate the impacts of a proposed development at the former Oakland Army Base. As detailed below, an Addendum (this document) is the appropriate California Environmental Quality Act (CEQA) document and no Supplemental or Subsequent EIR is required.

In 2002, the City prepared a "project level" EIR (2002 EIR), pursuant to *CEQA Guidelines* section 15180(b), which evaluated the environmental impacts of the Oakland Army Base (OARB) Redevelopment Plan and Army Base Reuse Plan. On July 29, 2002, the City Planning Commission certified the 2002 EIR, and the Oakland Base Reuse Authority adopted the 2002 EIR and approved the Reuse Plan. The City Council and Redevelopment Agency also took actions to certify/adopt the 2002 EIR in October 2002 and previously approved the Redevelopment Plan. No legal actions were filed challenging these actions or the 2002 EIR, and the 2002 EIR is presumed valid.

Concurrent with the actions described above in the City of Oakland, the Board of Port Commissioners adopted the Final Environmental Impact Report of the Oakland Army Base Area Redevelopment Plan in September 2002 as a responsible agency under CEQA.

The City relied on the 2002 EIR when it took further actions pursuant to and in furtherance of the Redevelopment and Reuse Plans over the years. For example, the City (a) certified the 2006 OARB Auto Mall Supplemental EIR and a 2007 Addendum; and (b) prepared a 2009 Addendum for the Central Gateway Aggregate Recycling and Fill Project.[1] In addition, on November 3, 2008, the City Council adopted Standards Conditions of Approval/Uniformly Applied Development Standards, via Ordinance No. 12899 C.M.S., which were revised, in part, in July 2011. In 2006, the Port's Board of Port Commissioners considered and approved an Addendum to the 2002 EIR that looked at the impacts of not relocating Maritime Street to the East onto OARB property.

The Redevelopment Area covered over 1,800 acres, including the former OARB, 16th/Wood area, and Maritime areas of the Port. The City and the Port are now proposing to develop a portion of the Redevelopment Area, which generally encompasses the former OARB (approximately 360.5 acres), primarily for transportation and logistics purposes, including railroad and street infrastructure and other trade and logistics improvements (collectively, "2012 Project", "Proposed Project" or "Project"), pursuant to and in furtherance of the Redevelopment and Reuse Plans.

This Initial Study/Addendum (IS/Addendum) demonstrates that no further/additional CEQA review is required as none of the circumstances necessitating preparation of additional CEQA review as

[1] The Automall CEQA documents were legally challenged by EBMUD and eventually the trial court ruled they could not be used as it relates to discharges from new development into an existing 15-inch sewer line and vacation/relocation of Wake Avenue, but were valid in all other respects. Neither project was developed.

specified in CEQA and the *CEQA Guidelines*, including Public Resources Code Section 21166 and *CEQA Guidelines* Sections 15162 and 15163, are present in that:

(1) there are no substantial changes to the project that would result in new significant environmental impacts or a substantial increase in the severity of significant impacts already identified in the Previous CEQA Documents;

(2) there are no substantial changes in circumstances that would result in new significant environmental impacts or a substantial increase in the severity of significant impacts already identified in the Previous CEQA Documents; and

(3) there is no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the Previous CEQA Documents were adopted, which is expected to result in (a) new significant environmental effects or a substantial increase in the severity of significant environmental effects already identified in the Previous CEQA Documents; or (b) mitigation measures which were previously determined not to be feasible would in fact be feasible, or which are considerably different from those recommended in the Previous CEQA Documents and which would substantially reduce significant effects of the project, but the City declines to adopt them.

Thus, in considering approval of the 2012 Project, the City and Port can rely on the previous CEQA documents.

Additionally, CEQA requires the analysis of potential adverse effects of the project on the environment. Potential effects of the environment on the project are legally not required to be analyzed or mitigated under CEQA. However, this document nevertheless analyzes potential effects of the environment on the project in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City Standard Conditions of Approval and/or project-specific non-CEQA recommendations to address these issues.

1.2 BACKGROUND

1.2.1 Army Base Closure

In 1995, the Federal Base Realignment and Closure (BRAC) Commission recommended closure and realignment/disposal of the Oakland Army Base (OARB). The U.S. Army, the lead agency for base closure and transfer, conducted or participated in the required environmental processes pursuant to the closure, and conveyed the majority of the OARB land to the Oakland Base Reuse Authority (OBRA).

Immediately upon the BRAC Commission's recommendation to close the OARB, the City of Oakland began to evaluate how best to implement reuse of the OARB and the surrounding areas. The City investigated redevelopment options, designated a Redevelopment Survey Area, and prepared the Oakland Army Base Area Redevelopment Plan that established a 1,800-acre Redevelopment Project Area, including the 430-acre OARB. The OARB Redevelopment Area is divided into three sub-districts: the OARB Sub-District; the Maritime Sub-District; and the 16th/Wood Street Sub-District. For a more detailed discussion, please see Chapter 2, Project Description.

1.2.2 Previous CEQA Review

The following describes the CEQA documents that have been prepared for the project site, which have been relied upon when preparing this IS/Addendum.[2]

a. OARB Redevelopment/Reuse Plan Environmental Review. The 2002 EIR for the OARB Area Redevelopment Plan was certified in July 2002 by the City of Oakland and adopted in September 2002 by the Port of Oakland. That EIR described and disclosed the potential environmental consequences associated with adoption, by the City of Oakland and the City of Oakland Redevelopment Agency, of the Redevelopment Plan for an area comprising about 1,800 acres including and surrounding the 430-acre former OARB. The analysis contained in the 2002 EIR identified all potentially significant environmental impacts of the Redevelopment Plan and provided mitigation measures that reduced the majority of impacts to a less-than-significant level. The 2002 EIR identified impacts that would be Significant and Unavoidable in the following areas:

- Transportation and Traffic
- Air Quality
- Cultural Resources
- Aesthetics
- Biology

To acknowledge these significant and unavoidable impacts, the City of Oakland adopted a Statement of Overriding Considerations after certification of the OARB Redevelopment EIR. The Oakland Army Base Reuse Authority also adopted a Statement of Overriding Considerations when it approved the Base Reuse Plan.

b. Auto Mall Project and Supplemental EIR. In 2006 the City of Oakland Redevelopment Agency contemplated an amendment to the Base Reuse Plan to consider development of an auto mall within the North Gateway of the OARB. An approximately 30-acre site located north of West Grand Avenue was envisioned for land uses that would include automobile dealerships arranged as an Auto Mall.

A Draft Supplemental Environmental Impact Report (SEIR) for the OARB Auto Mall Project was prepared in April of 2006. That Draft SEIR described and disclosed the potential environmental consequences associated with the proposed amendment to the Redevelopment Plan for the Auto Mall Project. The East Bay Municipal Utilities District (EBMUD) challenged the City's certification of the SEIR and an Addendum to the SEIR and approval of the Auto Mall Project. The Court ultimately set aside the City's December 18, 2007, certification of the Auto Mall SEIR and approval of the Auto Mall Project but only to the extent applicable to the Auto Mall Project and its environmental review and/or clearance under CEQA for (1) any discharges from new development into an existing 15-inch sewer line and/or (2) vacation and/or relocation of Wake Avenue which presently provides ingress and egress to EBMUD's Main Wastewater Treatment Plant.[3] This project was not further pursued.

[2] The previous CEQA documents are available at the Planning Division office located at 250 Frank H. Ogawa Plaza, Oakland, California, and on the City's website: www2.oaklandnet.com. The 2002 EIR is included on CD located on the back inside cover of this document.

[3] Superior Court of California, County of Alameda Case No.:RG07-326552 (CEQA Action), March 2009.

c. Maritime Street Relocation. After the 2002 EIR was certified, the Port conducted a study that looked closely at the balance of maritime facilities (including vessel berths), container yards, and rail yards in the Outer Harbor area. This study determined that "The capacity of the Port is not currently constrained by its maritime facilities. It is constrained by the capacity and performance of the road and rail intermodal connectors. The most effective configuration for the Port of Oakland over the next 15 to 20 years requires an increase in rail yard space, in addition to construction of the 7th Street grade separation."[4] Therefore, in 2006, the Board of Port Commissioners considered and adopted an Addendum that analyzed the impacts of not relocating Maritime Street to the East onto OARB property, a realignment that was originally proposed as part of the 2002 Project.

d. The Aggregate Recycling & Fill Project Initial Study. The Aggregate Recycling & Fill Project was proposed for the Central Gateway portion of the former OARB. The Central Gateway is situated northwest of Maritime Street and south of I-80. This project was primarily a concrete crushing and asphalt recycling operation, which would have accepted asphalt and concrete materials from off-site locations for crushing into recycled aggregate materials. While an Initial Study in support of an Addendum was circulated in 2009, this project was never pursued.

1.3 CHANGES IN THE PROJECT

This Initial Study/Addendum will assess the extent to which changes that are proposed as part of the 2012 Project may result in new significant environmental impacts or a substantial increase in the severity of significant impacts already identified in the previous CEQA documents. Figure 1-1 shows the 2002 Project and Figure 1-2 shows the 2012 Project. For this analysis, changes between the 2002 Project and the 2012 Project are primarily confined to the OARB sub-district, as shown in Figure 2-2 of the Project Description.

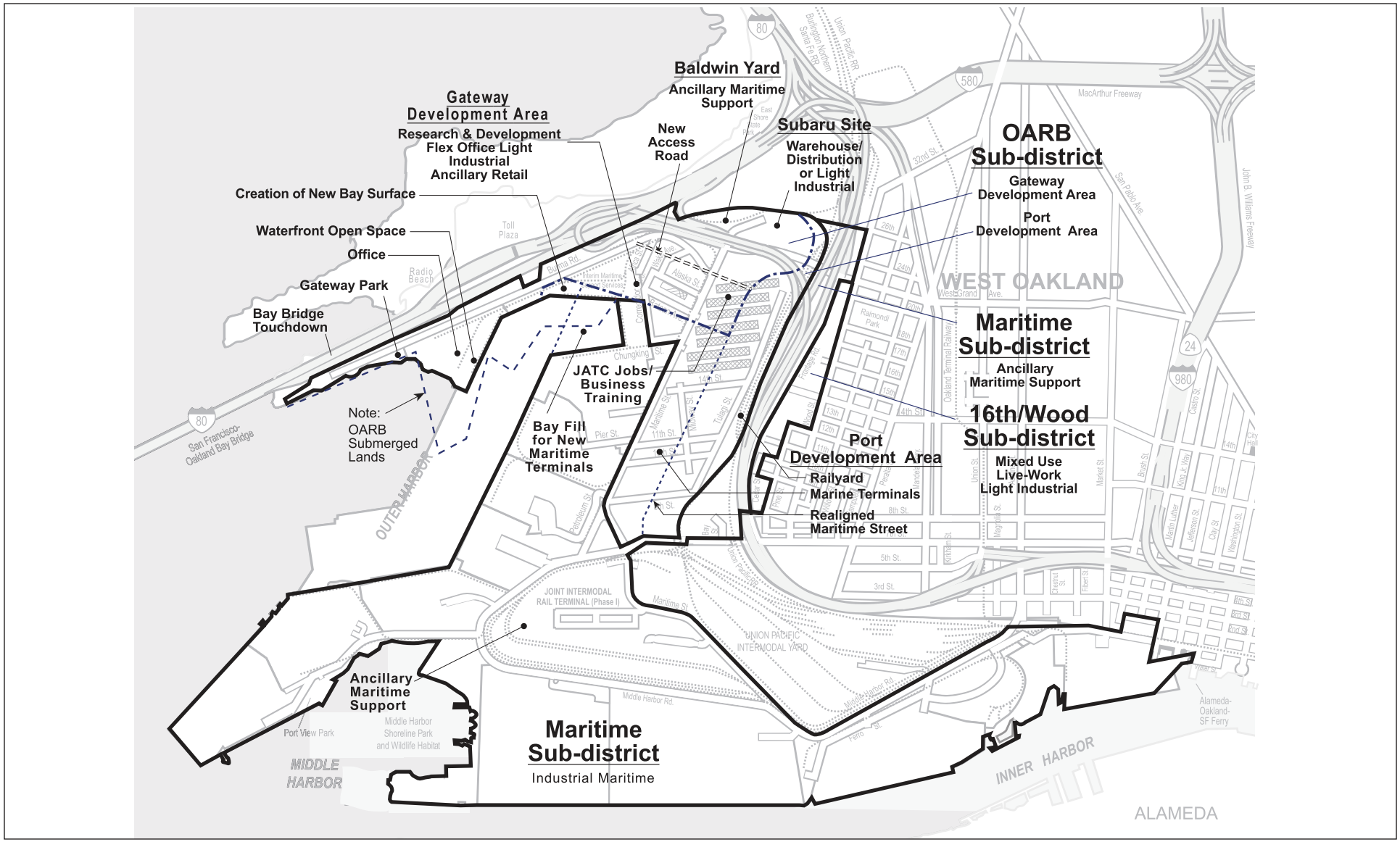
The primary difference between the 2012 Project and what was proposed for the same geographic location in the 2002 Project, is a shift from office/R&D to a greater amount of warehouse/distribution and maritime-related logistics uses as the predominant use. The 2012 Project proposes up to approximately 2.5 million square feet of warehouse/distribution and maritime-related logistics uses and 175,000 square feet of office/R&D, as compared to 300,000 square feet of warehouse/distribution and approximately 1.5 million square feet of office/R&D identified for the 2002 Project.

Additional components of the 2002 Project and the 2012 Project are summarized in Table 1-1 and listed below:[5]

- Approximately 20 to 24 acres north of Grand Avenue for 407,160 square feet of indoor recycling facilities are proposed to be located in the North Gateway, as compared to 494,000 square feet proposed for light industrial uses in the 2002 Project.

[4] Port of Oakland, 2004. *Maritime Development Alternatives Study*.

[5] The areas proposed by the 2002 Project for Gateway Park and new Berth 21 are <u>not</u> part of the 2012 Project.


Baldwin Yard
Ancillary Maritime Support
Gateway Development Area
Research & Development
Flex Office Light Industrial
Ancillary Retail
New Access Road
Subaru Site
Warehouse/ Distribution or Light Industrial
OARB Sub-district
Gateway Development Area
Port Development Area
Creation of New Bay Surface
Waterfront Open Space
Office
Gateway Park
Bay Bridge Touchdown
WEST OAKLAND
Maritime Sub-district
Ancillary Maritime Support
16th/Wood Sub-district
Mixed Use
Live-Work
Light Industrial
JATC Jobs/ Business Training
Note: OARB Submerged Lands
Bay Fill for New Maritime Terminals
Port Development Area
Railyard
Marine Terminals
Realigned Maritime Street
OUTER HARBOR
San Francisco-Oakland Bay Bridge
JOINT INTERMODAL RAIL TERMINAL (Phase I)
UNION PACIFIC INTERMODAL YARD
Ancillary Maritime Support
Port View Park
Middle Harbor Shoreline Park and Wildlife Habitat
MIDDLE HARBOR
Maritime Sub-district
Industrial Maritime
INNER HARBOR
ALAMEDA
Alameda-Oakland-SF Ferry
MacArthur Freeway
Union Pacific RR
Burlington Northern Santa Fe RR
Oakland Terminal Railway
Toll Plaza
Radio Beach
Raimondi Park
Middle Harbor Rd.
Maritime St.
Pier St.
Chungking St.
Alaska St.
Burma Rd.
Tulagi St.
Peralta St.
Pacific St.
Wood St.
Adeline St.
Market St.
Union St.
Magnolia St.
Kirkham St.
Chestnut St.
Filbert St.
Bush St.
King Jr. Way
Martin Luther
Jefferson St.
Clay St.
Washington St.
Castro St.
Peralta St.
Pacific St.
Ave St.
Bay St.
Mandela
Pine St.
Poplar St.
Hollis St.
Burma Rd.
Alaska St.
Chungking St.
Tulagi St.
Maritime St.
Wood St.
Pier St.
11th St.
14th St.
Peralta St.
Petroleum St.
Middle Harbor Rd.
Maritime St.
Union Pacific RR
Middle Harbor Rd.
Peralta St.
Water St.
Pacific St.
Pine St.
Poplar St.
Mandela
Union St.
Magnolia St.
Kirkham St.
Market St.
Bush St.
King Jr. Way
Martin Luther
Jefferson St.
Clay St.
Washington St.
Castro St.
Chestnut St.
Filbert St.
Adeline St.
Wood St.
Hollis St.
Burma Rd.
Alaska St.
Chungking St.
Tulagi St.
Maritime

LSA

FIGURE 1-2

WEST GATEWAY
CENTRAL GATEWAY
EAST GATEWAY
NORTH GATEWAY
PORT AREA
PROJECT BOUNDARY
PROPOSED BILLBOARDS

N

0 600 1200
FEET

SOURCE: ARCHITECTURAL DIMENSIONS, MAY 23, 2012.

I:\COO1001 Oakland Gateway\figures\Fig_1-2.ai (5/24/12)

2012 Oakland Army Base Project

2012 Project Conceptual Redevelopment Strategy

Table 1-1: Comparison of 2002 Project and 2012 Project

OARB Sub-District	Land Use	2002 Project[1]		2012 Project			
				Variant A Working Waterfront		Variant B R&D/Open Space	
		Square Feet	Acres[2]	Square Feet	Acres	Square Feet	Acres
Gateway Development Area (GDA)	Light Industry	494,000		-	-	Same as Variant A	
	Recycling Facilities	-	-	379,605	25		
	Retail	25,000		-	-		
	Ancillary Maritime Services[3]	n/a	15	37,673	15		
	Office, R&D	1,528,000		-	-	175,000	11
	Warehouse/Distribution	300,000		1,089,223	94	942,763	82
	Five (5) Billboards	-	-	n/a	Included	Same as Variant A	
	Building Development Subtotal	**2,347,000**	**183**	**1,506,501**	**133**	**1,535,041**	**133**
	Roadways[4]	n/a	Included	864,450	20	Same as Variant A	
	Rail Right-of-Way	-	-	124,200	3		
	Utilities	n/a	Included	n/a	Included		
	Wharf Reuse/Repair[5]	n/a	Included	504,600	13.1	91,100	2.1
	Infrastructure Subtotal[6]	**-**	**-**	**124,200**	**23**	**124,200**	**23**
	Public Access or Park[7]	n/a	10	n/a	3	n/a	12
	GDA Subtotal[6]	**2,347,000**	**193**	**1,506,501**	**159**	**1,535,041**	**168**
Port Development Area	Warehouse/Distribution	-	-	882,88	97	Same as Variant A	
	Ancillary Maritime Services	n/a	2	n/a	Included		
	Four (4) Billboards	-	-	n/a	Included		
	Building Development Subtotal	**-**	**2**	**882,881**	**97**	**882,881**	**97**
	Port Rail Terminal[9]	n/a	130	2,664,400	61	Same as Variant A	
	Roadways[4]	n/a	Included	657,550	15		
	Utilities	n/a	Included	n/a	Included		
	Marine Terminals and Cargo Throughput[8]	n/a	55	Not included as part of this project			
	Infrastructure Subtotal[6]	**n/a**	**185**	**2,664,400**	**76**	**2,664,400**	**76**
	Port Development Area Subtotal[6]	n/a	**187**	**3,547,281**	**173**	**3,547,281**	**173**
TOTAL		**2,347,000**	**380**	**2,389,382**	**332**	**2,417,922**	**341**

Note: All property and building measurements are approximate.

[1] The approximately 360-acre 2012 Project is almost entirely on the Oakland Army Base portion of the Oakland Army Base Redevelopment Area. What is shown under the 2002 Project only includes the development that was proposed in the same geographic area of the 2012 Project.

[2] Acres refers to total land area occupied by this use, not proposed building square footage.

[3] Ancillary Maritime Services (AMS) uses may include a variety of port-related transportation supporting facilities, including and not limited to: truck parking; cargo storage and other maritime support services. The 2012 Project does not include a change in AMS uses but does include a change in location.

Table notes continued on next page.

[4] Includes the following changes: 1) Maritime Street will not be relocated and will be improved in same general location through the Gateway Development Area to the Gateway Peninsula; Burma Road (West Burma) will be relocated south of its current alignment in the Central Gateway, and connect to a new Access Roadway (East Burma) east of Maritime; 2) Under the highway there will be no change from what was studied in the 2002 EIR; 3) changes proposed to Grand Avenue at-grade were required mitigation as part of the 2002 EIR at Grand Avenue/Maritime Street; 4) two variants for 7th Street grade separation are included.

[5] As noted in Footnote 17 (p.3-29 of the 2002 EIR), Wharf 7 and the majority of Wharf 6 ½ would remain and be reused.

[6] Wharf repair/reuse and roadways are not included in the calculations for any of the building or infrastructure subtotals or total development.

[7] The 2002 EIR included 29 acres of park/public access which consisted of 10 acres of shoreline access and 19 acres for a Gateway Park to be developed by EBRPD. The 2012 Project area does not include the 19-acre Gateway Park. Gateway Park is in the early planning stages being led by EBRPD and a consortium of agencies.

[8] The new marine terminal in the OARB Sub-district and the Maritime Sub-district ("New Berth 21") studied in the 2002 EIR continue to be part of the Port's development plan. However, these improvements will not be constructed as part of the 2012 Project but are considered a cumulative project. 4.05 million twenty-foot equivalent units (TEU) of container cargo throughout was cleared through the 2002 OARB EIR.

[9] The Port's Joint Intermodal Terminal, which is not located on the OARB property, will be retained; the 2002 EIR considered demolishing that rail yard.

Source: City of Oakland, Port of Oakland, CCIG, 2012.

- Both the 2002 Project and the 2012 Project include the BCDC-required acreage for Ancillary Maritime Services (AMS) for the City and Port. However, in the 2012 Project, the 15-acres of BCDC-required AMS in the City-owned portion of the OARB is now being provided in three different locations within the project area. As part of the proposed truck parking facilities, there would be fueling services, which would include biodiesel. The BCDC-required fifteen (15) acres of AMS for the Port are now being provided in the 2012 Project as truck parking.
- A commemorative area is proposed within the Central Gateway, in the vicinity of the intersection of Maritime Street and Burma Road, to memorialize the contributions of civilians and the military in the Bay Area to World War II, and the Korean and Vietnam Wars.
- Demolition, site preparation, and remediation are generally the same in both the 2002 and 2012 Projects.
- Up to nine billboards are proposed to the north of West Burma Road, along Grand Avenue and along I-880 (Figure 2-6) as part of the 2012 Project; no billboards were proposed as part of the 2002 Project.
- The Port-owned Joint Intermodal Terminal (JIT) will remain in operation as a rail yard.
- Berth/Wharf 7 will remain in operation as a bulk terminal under Variant A.
- The railroad intermodal terminal in the OARB sub-district Port Development Area and associated right-of-way to support maritime uses that were proposed in the 2002 Project will be constructed as part of the 2012 Project, but will be smaller (approximately 61 acres).
- Maritime Street is proposed to be improved with intersection controls, bicycle and pedestrian paths, repaving and landscaping, and includes a minor reconfiguration. The street will not be relocated 400-600 feet to the east as was proposed in the 2002 Project (see Port's 2006 Addendum that looked at the impacts of not relocating Maritime Street to the east onto OARB property). Roadway improvements also include options to improve Burma Road and Engineers Road to relocate Wake Avenue, and to rebuild and grade separate 7th Street west of I-880.
- Installation of new utility systems that meet current standards, such as water distribution (both domestic and reclaimed water), wastewater collection, stormwater collection/discharge, gas distribution, electrical systems, security, telecommunication and similar systems.[6]

1.4 CHANGE IN CIRCUMSTANCES

There have been a number of circumstances that have changed since certification of the 2002 EIR including:

- A major portion of the OARB Redevelopment District's 16th/Wood Street subarea has since been approved for residential and limited commercial development.[7]

[6] No new connections will be made to EBMUD's existing 15" sewer line. Please see Chapter 2, Project Description, and Section 3.17, Utilities and Service Systems, for additional descriptions.

[7] Oakland, City of, 2005. Wood Street Development Project (formerly Central Station), approved by the City Council on June 7, 2005.

- Those portions of West Oakland not located in a previously established redevelopment area or the OARB Redevelopment Area have since been included in the West Oakland Redevelopment Area.
- The City of Oakland and the Port of Oakland have conducted minor land transfers for purposes of facilitating access and rail yard configurations.
- Hazardous materials clean-up operations have been conducted in several portions of the OARB, pursuant to the approved OARB Remedial Action Plan/Risk Management Plan (RAP/RMP) (see Section 3.8, Hazards and Hazardous Materials).
- The U.S. Army Reserves have completed transfer of their former land ownerships within the former OARB to the Oakland Redevelopment Agency and the Port of Oakland.
- The City of Oakland, Port of Oakland, and State Lands Commission have negotiated and settled issues related to the designation of lands subject to Tidelands Trust through the recordation of the Oakland Army Base Title Settlement and Exchange Agreement dated August 7, 2006.
- The East Bay Municipal Utility District (EBMUD) has prepared a Main Wastewater Treatment Plant (MWWTP) Land Use Master Plan which will serve as a planning tool for the property over the next 30 years. The plan includes two renewable energy projects proposed for the near term: biodiesel production and food waste reprocessing to help EBMUD meet sustainability goals by increasing onsite power generation.[8]
- BCDC, through Resolution No. 07-07 dated January 22, 2007, has approved the relocation of the AMS use requirement to the East Gateway.
- Related Port improvement projects were completed including the 50-foot channel deepening project, reconstruction of Berths 30-32 and 60-63 container terminal yards and Berth 22 wharf, and the Vision 2000 maritime development of the former US Navy Fleet Industrial Supply Center Oakland.
- New State regulations and Port policies related to emissions reductions from Port sources, including:
    - 2004 Air Toxics Control Measure (ATCM) for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets (13 CCR 2477) limiting emissions from TRU at ports and other facilities in California;
    - 2005 Cargo Handling Equipment Emissions Regulation (13 CCR 2479) limiting emissions from off-road cargo handling equipment at ports and railyards in California;
    - 2007 Drayage Truck Regulation (13 CCR 2027) limiting emissions from trucks doing business at California Ports;
    - 2007 Shore Power Regulation (13 CCR 2299.3 and 17 CCR 93118.3) restricting the emissions of auxiliary engines by container ships and other vessels while berthed at California ports;

[8] EBMUD certified an EIR (SCH #2009112073) when it adopted the Land Use Master Plan in June 2011. The City, if it acts as a Responsible Agency in approving the State-mandated Non-Disposal Facility Element, would be relying on this EIR.

- 2007 Commercial Harbor Craft Regulation reducing emissions from diesel engines on commercial harbor craft, including tugboats, towboats, crew and supply vessels, work boats and pilot vessels, among other vessels;
- 2008 Ocean-Going Vessel Low Sulfur Fuel Rule (13 CCR 2299.2 and 17 CCR 93118.2) requiring vessels operating within 24 nautical miles of California to use low sulfur fuels to reduce emissions;
- Comprehensive Truck Management Plan (Port Ordinance 4112) banning certain trucks which fail to meet the Drayage Truck Regulation and implementing a licensed motor carrier registry for trucking companies doing business at the Port of Oakland; and
- Maritime Air Quality Improvement Policy Statement (Port Resolution 08057) and Maritime Air Quality Improvement Plan (Port Resolution 09038) setting human health risk improvement goals associated with diesel particulate matter emissions and identifying a roadmap to achievement of such goals.

1.5 NEW INFORMATION

This document assesses the extent to which "new information of substantial importance" was known, or could have been known, with the exercise of reasonable diligence at the time of the previous CEQA documents that may indicate a new significant impact or a substantially increased significant environmental impact associated with the Project. Since certain information on air quality and global climate change was known, or could have been known in 2002 and later, it is not legally "new information" as specifically defined under CEQA. However, an analysis of the 2012 Project relying on the recommended May 2011 Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and Thresholds has nevertheless been conducted in order to provide more information to the public and decision-makers, and in the interest of being conservative.[9] Although the analysis in this IS/Addendum evaluates air quality and global climate change using both the 2002 EIR significance thresholds (based upon BAAQMD 1999 CEQA Thresholds) and the BAAQMD May 2011 CEQA Guidelines and Thresholds, significance determinations are based on the thresholds from the 2002 EIR.

New information is included in this Initial Study/Addendum, along with an assessment of whether this new information indicates that the 2012 Project may have a new significant environmental effect or a substantial increase in the severity of previously identified significant effect.

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (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. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-

[9] On March 5, 2012, the Alameda County Superior Court issued a Judgment invalidating the May 2011 BAAQMD Thresholds, and BAAQMD recommends the Thresholds not be used. Nevertheless, in the absence of further technical guidance, the City is generally continuing to use the May 2011 BAAQMD Guidelines in its CEQA review.

[10] The Port will impose the City of Oakland SCA where the 2012 Project requires building and electrical permits, which apply to most projects at the Port.

than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply. The Port does not generally use the City SCA for projects that do not need City permits, but does rely on the MMRP and on adopted Port policies, such as the Exterior Lighting Policy.[11]

1.6 CUMULATIVE ANALYSIS BACKGROUND

1.6.1 Approach

CEQA defines cumulative as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts". Section 15130 of the *CEQA Guidelines* requires that an environmental document evaluate potential environmental impacts when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, current projects, and probable future projects. "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects." The City of Oakland's analysis approach specifies that "past, present, existing, approved, pending and reasonably foreseeable future projects" should be included as part of the cumulative analysis.

1.6.2 Context

The context used for assessing cumulative impacts typically varies depending on the specific topic being analyzed. For example, considerations for the cumulative air quality analysis are different from those used for the cumulative analysis of aesthetics. In assessing aesthetic impacts, only development within the vicinity of the project would contribute to a cumulative visual effect. In assessing air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions is the best tool for determining the cumulative effect. Accordingly, the geographic setting and other parameters of each cumulative analysis discussion can vary.

Generally, to establish a partial baseline for cumulative analysis, the City of Oakland's Major Projects list was used, in part, to determine past, present, existing, approved, pending and reasonably foreseeable future projects in the vicinity of the former Oakland Army Base. The geographic areas near the 2012 Army Base Project Site generally include West Oakland, Downtown/Central Oakland, Uptown,

[11] At various places throughout this Addendum, Mitigation Measures and Standard Conditions of Approval indicate that the project sponsor, project applicant, developer, City and/or Port are responsible for implementation. Regardless of such, the City within its jurisdiction and the Port within its jurisdiction are responsible for implementing the Mitigation Measures and/or Standard Conditions of Approval. Where both the City and Port jurisdictions are involved, both entities are responsible.

and Lake Merritt Business District. Major projects from the City's Major Projects List that pertain to the former Army Base vicinity are summarized below.[12] Projects listed below are not inclusive of all possible past major projects; projects not listed were no longer maintained on the City's list as of November 2011 but are part of the baseline assumptions for this analysis. Additional development projects that are not on the City's Major Projects list have also been considered for the cumulative assessment of certain topic areas and are identified in the appropriate environmental topic section in this document. Specifically, a more detailed cumulative list of projects was identified in order to analyze cumulative visual, wind and shadow effects in the project area, given the site specific and localized nature of these effects. Moreover, the transportation analyses (and transportation-related traffic, noise and air quality) used the Alameda County Transportation Commission (former Congestion Management Agency) Analysis; a travel demand model which requires inputs at the traffic analysis zones (TAZ) level, which includes reasonably foreseeable projects through the years 2020 and 2035 based on land use assumptions updated to ABAG's Projections 2009.

Projects that are relevant to the cumulative analysis include those that could contribute incremental effects on the same environmental resources and would have similar environmental impacts to those discussed in this document. The cumulative impact discussions below analyze the potential cumulative impacts that could occur when the impacts of the 2012 OARB Project are considered in combination with the impacts of other past, present, and reasonably foreseeable future projects that are generally subject to independent environmental review and consideration by approving agencies. Consequently, it is possible that some of the reasonably foreseeable future projects will not be approved or will be modified prior to approval (e.g., as a result of the CEQA alternatives analysis process). For the purposes of assessing worst-case cumulative impacts, however, the cumulative impact analysis is premised on the approval and construction of all of the reasonably foreseeable projects identified in this analysis. These projects are briefly described below:

- As detailed in Section 1.4, Change in Circumstances, a number of development and other projects have been approved and/or constructed, along with other activities on/near the former Army Base since 2002.
- As discussed and analyzed in the 2002 OARB Redevelopment Plan EIR, the Port proposes additional projects that are not part of the 2012 Project studied in this Initial Study/Addendum; however, they are considered as part of the cumulative analysis:
    - Port-wide marine cargo throughput of 4.05 million TEUs.
    - Replace existing Outer Harbor Berths 21, 20, 10, 9, and 8 with "New Berth 21". To achieve an efficient terminal and berth geometry, reconfigure a portion of the Outer Harbor shoreline, including both excavation and fill to create about 29 acres of new land for a marine terminal.
    - Expand and realign maritime facilities to achieve cargo throughput efficiencies by adjusting boundaries and consolidating property within marine terminals in response to tenant demand.
- As discussed in the 2002 OARB Redevelopment Plan EIR, an approximately 19-acre area along the south side of the Bay Bridge touchdown is being planned as a regional park. "Gateway Park" is not part of the 2012 Project studied in this Initial Study/Addendum; however, it is considered as part of the cumulative analysis. It is currently part of a separate effort being planned by the

[12] A more complete version of the list can be found on the City's website at: www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak025453.pdf and is incorporated herein by reference.

Gateway Park Working Group, a consortium of agencies including the Bay Area Toll Authority (BATA), Caltrans, Bay Conservation and Development Commission (BCDC), California Transportation Commission (CTC), East Bay Regional Park District (EBRPD), City of Oakland, Port of Oakland, East Bay Municipal Utility District (EBMUD), and Association of Bay Area Governments (ABAG) Bay Trail Project, among other agencies.

- The California Department of Transportation (Caltrans) proposes to replace and reconstruct the existing maintenance facilities located at the San Francisco Oakland Bay Bridge (SFOBB) Toll Plaza area in Oakland. The existing SFOBB Maintenance Complex is located in two separate areas of the Toll Plaza. The Tow/Electrical Sub Shop and the Toll Operation Building are located in the median of the toll plaza area. The remainder of the complex consists of a series of buildings, structures, and installations located south of the eastbound lanes of Interstate 80 in the toll plaza area and north of Burma Road and the Port of Oakland.
- The San Francisco/Oakland Bay Bridge Seismic Safety Project includes construction of a new two-mile-long east span for the Bay Bridge. This project includes construction of bridge piers within San Francisco Bay and Oakland mudflats, and construction of the bridge above the Bay. Five stormwater detention ponds would be constructed beneath the MacArthur maze. Construction of this project is expected to be complete by 2013.
- Additional planned recreational facilities in the project vicinity include parts of the San Francisco Bay Trail. The preferred alignment for the San Francisco Bay Trail is adjacent to the northern property boundary of the MWWTP, and completion of this segment of the trail will help complete the trail that will connect all nine Bay Area counties.
- Approved private development projects near the 2012 Project site include:
    - Red Star affordable senior housing project, located at 1396 5th Street, includes 119 affordable senior units and 3,300 square feet of commercial space and has been approved and is currently under construction;
    - A 92-unit affordable senior housing project, located at 116 E. 14th Street, has been approved;
    - Several residential and live/work projects in the 16th/Wood Sub-district of the OARB Redevelopment Area Plan (e.g., Zephyr Gate, Pacific Cannery Lofts and the Ironhorse Apartments at Central Station) have been approved and/or completed;
    - Mandela Transit Village, located at 1357 5th Street, includes 120 residential units and 38,500 square feet of commercial space and has been approved;
    - Mandela Gateway Townhomes, located at 1431 8th Street, includes 14 condominiums and has been completed;
    - Ettie Street/Mandela Parkway live/work project, located at 2818 Mandela Parkway, includes 91 live/work units; and
    - Mandela Gateway Gardens, located at 1431 7th Street, includes 200 residential units and 15,000 square feet of retail space (that also includes some live/work units) and has been completed.
- The City of Oakland has three specific planning efforts underway:
    - The Broadway Valdez District Specific Plan preferred land use concept envisions a retail core in the Valdez Triangle with a mix of housing and office uses in the approximately 96-acre

area around Broadway, which is generally bounded by Interstate-580 to the north, Grand Avenue to the south, Webster Street and Valley Street to the west, and Harrison Street, Bay Place, 27th Street, Richmond Avenue, and Brook Street to the east; an NOP for the Specific Plan EIR was issued on April 30, 2012.

  - The Lake Merritt Station Area Plan preferred land use plan envisions a mix of transit-oriented retail, housing and office uses to take advantage of the transit-rich Plan area generally bounded by I-880 to the south, 14th Street to the north, Broadway to the west and 5th Avenue to the east; an NOP for the Specific Plan EIR was issued on March 1, 2012.
  - The West Oakland Specific Plan is in the process of determining potential uses for key opportunity sites in the area generally bounded by I-580, I-980, 3rd Street and I-880; while an EIR will be prepared for this project, an NOP has not yet been issued.

- The City of Oakland is considering proposals from various Outdoor Advertising Companies to rent and develop advertising sign relocation or franchise agreements for one or more City-owned properties currently available throughout the City. The potential locations for new/relocated billboards are primarily concentrated in the Downtown/Lake Merritt area; they are not near the 2012 Project site.
- On March 20, the Oakland City Council recently adopted Amendments to the Central District Urban Renewal Plan, which extended the duration of the Redevelopment Plan and increased the cap on the receipt of tax increment revenue.

1.7 SUBSEQUENT INITIAL STUDY/ADDENDUM SCOPE

Environmental Topics Covered in the Subsequent Initial Study/Addendum

This IS/Addendum updates information, and provides clarification and further analysis for the following environmental topics, which are addressed in separate sections in Chapter 3:

- *Aesthetics.* This section evaluates the potential visual impacts associated with the build out of the 2012 Project, including installation of up to 9 billboards.
- *Agricultural Resources and Forest Resources*. This section describes the absence of agricultural or forest resources on the 2012 Project site.
- *Air Quality.* This section provides an updated air quality analysis.
- *Biological Resources*. This section provides an updated analysis that addresses the proposed changes in the site plan. Current regulatory requirements associated with biological resources are described.
- *Geology and Soils.* This section provides an updated geology and soils assessment that addresses the proposed site plan changes and current regulatory requirements.
- *Greenhouse Gas Emissions.* This section addresses an environmental topic that was recently added to the State *CEQA Guidelines* and therefore was not addressed in the 2002 EIR; this section discusses potential global climate change impacts associated with the 2012 Project.
- *Hazards and Hazardous Materials.* This section discusses the current regulatory requirements applicable to potential hazardous materials at the project site.

- *Hydrology and Storm Drainage.* This section evaluates the proposed changes to the site plan and updates the hydrology and water quality assessment. Current regulatory requirements pertaining to hydrology and water quality issues are described.
- *Land Use and Planning Policy*. This section evaluates the 2012 Project as it relates to land use and planning issues. Current planning policies and land use requirements are described.
- *Mineral Resources.* This section describes the lack of mineral resources on the project site.
- *Noise.* This section provides an updated noise analysis that addresses the proposed site plan changes and current regulatory requirements.
- *Population, Housing and Employment.* This chapter describes the changes in employment projections associated with the 2012 Project.
- *Public Services and Recreation.* This section provides an updated discussion on potential public services and recreation impacts.
- *Transportation/Traffic.* This section outlines the potential transportation impacts associated with the 2012 Project.
- *Utilities and Service Systems*. This section provides an updated discussion on potential utility and service system impacts.

1.8 SUBSEQUENT INITIAL STUDY/ADDENDUM ORGANIZATION

This Initial Study/Addendum is organized into the following chapters:

- *Chapter I – Introduction:* Discusses the overall document purpose, project background and provides a summary of the 2012 Project; describes the IS/Addendum scope; and summarizes the organization of the document.
- *Chapter II – Project Description:* Provides background on the project; description of the project site, site characteristics and conditions, and details of the project itself, as well as steps taken to implement the adopted Redevelopment and Base Reuse Plans.
- *Chapter III – Environmental Topics Requiring Updated Discussion:* This chapter provides an update of existing site conditions, and update of applicable policies and regulations, and an environmental assessment of the build out of the 2012 Project. For each environmental topic, the chapter summarizes the 2002 EIR analysis and conclusions, identifies currently applicable Standard Conditions of Approval for City projects, updates the regulatory setting, summarizes existing conditions, and analyzes the effects the implementation of the 2012 Project and compares that with the information contained in the 2002 EIR. Also, previously imposed mitigation measures from the 2002 EIR are identified, and where appropriate, are clarified, refined, revised, or deleted.
- *Chapter IV – Report Preparation:* Identifies preparers of the document, references used and persons and organizations contacted.
- *Appendices:* The section includes all appendices reference in the Initial Study/Addendum.

REFERENCES

Oakland, City of, 2005. Wood Street Development Project (formerly Central Station), approved by the City Council on June 7, 2005.

Port of Oakland, 2004. Maritime Development Alternatives Study.

Superior Court of California, County of Alameda Case No.:RG07-326552 (CEQA Action), March 2009.

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2.0 PROJECT DESCRIPTION

2.1 BACKGROUND

In 2000, the City adopted and approved the *Redevelopment Plan for the Oakland Base Redevelopment Project*, establishing a 1,800-acre redevelopment project area with the former Oakland Army Base (OARB) at its core. The OARB, an approximately 430-acre facility located on the West Oakland waterfront, was first commissioned in 1941 as a port and trans-shipment facility. During World War II, it served as a major cargo port and warehousing facility. Up until 1995, the base was active with warehouse uses and approximately 2,040 employees.

In 1995, the Base Realignment and Closure Commission recommended closure and realignment/ disposal of the Oakland Army Base. As part of the base closure process, the U.S. Army prepared an Environmental Impact Statement (EIS), consulted with and received approval of a Coastal Zone Consistency Determination from the San Francisco Bay Conservation and Development Commission (BCDC), consulted with the State Office of Historic Preservation regarding cultural resources, and consulted with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) regarding biological resources. The base was officially closed for military operations in September 1999.

Prior to the official closure of the base in September 1999, the Oakland Base Reuse Authority (OBRA) was established to direct the planning process for the future reuse of the OARB. The OBRA consulted with representatives of the West Oakland community, the community that would be most impacted by the closure, and other key stakeholders. The OBRA's efforts resulted in a *Draft Final Reuse Plan for Oakland Army Base* (OBRA 1998, as amended 2001), which contains a conceptual vision and broad policy framework for the OARB's development. (As explained below, a Final Reuse Plan was adopted in July 2002).

The *Redevelopment Plan* incorporates the *Reuse Plan* and provides a program of redevelopment, rehabilitation, and revitalization of the project area. Objectives of the *Redevelopment Plan* focused on the elimination of blight and blighting influences, and strengthening the City's economic base. The Redevelopment Area was divided into the following three sub-districts:

- The Oakland Army Base Sub-District, 470-acres, includes the 430-acre Army Base and approximately 40 acres beyond the Army Base.[13] The OARB Sub-District is subdivided into two development areas:
    - the City of Oakland's 228-acre Gateway Development Area, generally located in the northwest portion of the sub-district. The Gateway Development Area includes approximately 189 acres of the OARB and several miscellaneous parcels generally located outside of the OARB

[13] The 40 acres includes 14 miscellaneous acres between the Base and Interstate 80 and 26 acres of U.S. Army Reserves property in two locations: the 19-acre Subaru Lot immediately north of West Grand Avenue and the 7-acre Enclave in the south central portion of the OARB.

and north of Burma Road. These miscellaneous parcels are currently owned by the City, the Port, and Caltrans.

  - the Port of Oakland's 241-acre Port Development Area, located in the west and southeast portions of the sub-district. The Port Development Area includes approximately 185 acres of land area from the OARB and an additional 56 acres of OARB submerged land.

- Maritime Sub-District, 1,290 acres owned by the Port of Oakland. This property is separate from the Oakland Army Base, and constitutes the remainder of the gross land area at the Port of Oakland seaport.
- 16th/Wood Sub-District, 41 acres, various private land owners.

In July 2002, the *Final Environmental Impact Report of the Oakland Army Base Area Redevelopment Plan* was certified[14] and a Final Reuse Plan was adopted by OBRA.[15] A broad set of activities was contemplated under the 2002 Reuse Plan and EIR, consistent with the Redevelopment Plan, including warehousing and distribution, retail, office and research and development, truck related activities and other Port related activities. Table 2-1 shows the build out of the Redevelopment Area analyzed in the 2002 EIR.

Table 2-1: 2002 OARB Area Redevelopment Project Area Build Out, 2002 Through 2020

		Redevelopment Sub-District				
		OARB[a]				
Potential Land Uses	**Units[b]**	**Gateway**	**Port**	**Maritime**	**16th/Wood**	**Total**
Light Industry	sq. ft.	494,000[c]		0	305,000	799,000
Office, R&D	sq. ft.	1,528,000		0	1,437,000	2,965,000
Retail	sq. ft.	25,000		0	1,300	26,300
Warehouse/distribution	sq. ft.	300,000		0	0	300,000
Total square feet		**2,347,000**		**0**	**1,743,300**	**4,090,300**
Live/work units					375	375
From uses listed above	ac.	168	0	0	40	208
Park, Public Access	ac.	29	0	0	1	30
New Maritime Terminals	ac.		55	65	0	120
Terminal Reconfiguration	ac.			82		82
Maritime Support	ac.	15	2	88[e]	0	105
Rail	ac.		130	35	0	165
Acres to be Redeveloped[d]		**212**	**187**	**270**	**41**	**710**
Total acres		**228**	**241**	**1,290**	**41**	**1,800**

[a] As required by federal BRAC law, redevelopment of the OARB sub-district includes a Homeless Assistance Accommodation program. Redevelopment as proposed would locate the entire program outside the project area; however, 2002 Draft EIR Chapter 7, Alternatives to the Proposed Redevelopment Program, examines alternatives for locating the Homeless Assistance Accommodation program on site.
[b] sq. ft. = square feet; ac. = acres
[c] Includes 50,000 square feet of training facilities for the Joint Apprentice and Training Committee (JATC).
[d] Acreages identified above are gross land use acreage, and include roadway and utility rights-of way.
[e] Includes a Maritime Support Center (See Section 3.6.4 of the 2002 Draft EIR).

Source: OARB Area Redevelopment EIR, Public Review Draft. April 2002.

[14] Special provisions of CEQA allowed for adoption of Redevelopment Plans for former military bases prior to the CEQA process being completed.

[15] Subsequently, the City has amended the Reuse Plan and completed three other environmental documents, a 2006 Supplemental EIR and 2007 Addendum for a proposed Auto Mall and a 2009 Addendum for a proposed aggregate recycling and fill project, both on portions of the Gateway Development Area. Neither of these projects was pursued.

Concurrently with the actions described above in the City of Oakland, the Board of Port Commissioners adopted the *Final Environmental Impact Report of the Oakland Army Base Area Redevelopment Plan* in September 2002 as a responsible agency under CEQA. The 2002 EIR evaluated the following developments within the Port Development Area of the OAB:

1) realign and extend the part of Maritime Street north of 7th Street,[16] and
2) relocate the Port's Joint Intermodal Terminal (JIT)[17] rail facility onto the OAB.

Within the larger Maritime Sub-district, the 2002 EIR considered projects to:

1) realign Maritime Street south of 7th Street;
2) widen and grade separate 7th Street, which borders the rail yard to the south, to reduce truck crossing delays at the Maritime Street and 7th Street intersection due to rail movements between the JIT and the Outer Harbor Intermodal Terminal (OHIT) railyard;
3) expand existing Port marine terminals;
4) construct a new marine terminal (with 26 net acres of Bay fill) adjacent to Berth 22 (New Berth 21); and
5) develop a maritime support center for truck parking, container depots, container freight stations, inspection sites and other cargo services.

The EIR is consistent with Port-wide growth in cargo to meet the Port's share of regional cargo throughput in 2020, as identified in the Seaport Plan ((BCDC and MTC 1996, as amended through 2007).

After the 2002 EIR was certified, the Port conducted a study that looked closely at the balance of maritime facilities (including vessel berths), container yards, and rail yards in the Outer Harbor area. This study determined that "The capacity of the Port is not currently constrained by its maritime facilities. It is constrained by the capacity and performance of the road and rail intermodal connectors. The most effective configuration for the Port of Oakland over the next 15 to 20 years requires an increase in rail yard space, in addition to construction of the 7th Street grade separation."[18]

In August 2006, approximately 170 acres of the former Army Base were conveyed to the Oakland Redevelopment Agency to comprise the Gateway Development Area, and another 200 acres were transferred to the Port. The City of Oakland acquired the Redevelopment Agency's interest in the former Oakland Army Base and is now planning for the development of approximately 160 acres of City-owned land within the former Oakland Army Base that will be known as the 2012 Oakland Army Base Project. The City of Oakland solicited proposals from master developers for the City-owned site and in 2009 the joint venture between Prologis and California Capital and Investment Group (Prologis/
CCIG) was selected as the master developer. The Port of Oakland is planning for the development of approximately 168 acres east of Maritime Street, including 164 acres within the OAB sub-district's

[16] An Addendum that looked at the impacts of not relocating Maritime Street to the East onto OAB property was considered by the Board of Port Commissioners on October 3, 2006, and adopted with Resolution 06251.

[17] The Port's tenant at the JIT, BNSF Railway, refers to the rail yard as Oakland International Gateway (OIG).

[18] Port of Oakland, 2004. *Maritime Development Alternatives Study*.

Port Development Area, and a 4 acre Port owned parcel along 7th Street within the Maritime sub-district. Additionally the proposed development includes an approximately 10 acre area surrounding the 7th and Maritime Street intersection which is also within the Maritime sub-district. The proposed development for both the City-owned and the Port-owned areas will be collectively known as the 2012 Oakland Army Base Project.

2.2 SETTING

2.2.1 Location

The Oakland Army Base site is located in western Oakland, partially along the eastern shoreline of San Francisco Bay (Figure 2-1). This is the westernmost portion of West Oakland. The project area is located approximately two miles west of the central business district. It is located adjacent to several regional transportation links, as well as to the Bay. The project area (Figure 2-2) is bounded by the following:

- To the north is Interstate 80 (I-80), and the Bay Bridge touchdown (where the bridge meets land, located on a peninsula into the Bay also called the "Gateway peninsula") and Bay Bridge Toll Plaza; beyond is the Bay.
- To the northeast is the East Bay Municipal Utility District (EBMUD) Main Wastewater Treatment Plant (MWWTP), a large, region-serving industrial sewage treatment facility. Beyond the MWWTP are those portions of Interstates 80, 580 and 880 known as the "MacArthur maze", and farther beyond is the City of Emeryville. To the east and southeast is the Union Pacific (UP) railyard. Approximately 2 miles southeast of the site is Jack London Square.
- To the southwest is the Port's Joint Intermodal Rail Terminal (JIT) and farther beyond are Port marine terminals, including Berths 55-56 (Total Terminals International, operated by Hanjin) and Berths 57-59 (Oakland International Container Terminal, operated by SSAT), Middle Harbor Shoreline Park, and the Oakland Estuary. Beyond the estuary is the former Naval Air Station Alameda in the City of Alameda, another closed military installation, which is now named Alameda Point.
- To the west is the Port of Oakland's Berths 20-26 marine terminal, operated by Ports America Outer Harbor Terminals, LLC, and the site of the proposed New Berth 21 marine terminal.

The 2012 Project is almost entirely on the Oakland Army Base portion of the Redevelopment area; the majority of the project is within the Oakland Army Base Sub-District (Figure 2-3). At the south end of the project site, the project extends into the Maritime Sub-District. The proposed project does not include any elements in the 16th/Wood Sub-district.

The area around the Oakland Army Base Redevelopment Area is urbanized and generally industrial with some vacant or underdeveloped parcels (Figure 2-4). As described above, northeast is the EBMUD MWWTP. East of the site, east of the Union Pacific (UP) and (BNSF) rail yards and I-880 are commercial and industrial uses. The residential community of West Oakland is farther to the east. South of the Redevelopment Area are marine terminals, the Oakland Inner Harbor and residential and commercial uses in the City of Alameda.

2.2.2 Existing Land Uses

The approximately 360.5-acre project site is dominated by industrial and transportation uses. The project site contains truck parking, cargo container storage, maintenance facilities, rail yards, large warehouses, and vacant land. Table 2-2 lists the existing tenants and uses on the project site. Figure 2-4 provides an aerial of the project site and generally notes existing land uses.

Table 2-2: Existing Oakland Army Base Tenants and Uses

Tenant	Land Use	Building Area Leased (sq. ft.)	Land Area Leased (ac.)	Number of Employees
Port Owned Properties				
Pacific Coast Container	Warehouse storage and distribution	90,700	3.2	140
Impact Transportation	Warehouse storage and distribution	77,510	0.0	63
Wings Century	Trucking operation	0	1.6	36
United Intermodal Services	Container services	0	8.3	22
Admiral Security	Security for truck parking	1,200	0.0	18
Industrial Railways	Rail, warehouse and storage yard	47,000	2.0	9
Wings Depot	Container storage	0	1.1	7
MDI Forest	Log export terminal	0	2.8	6
Pansini (Ampco)	Truck parking	0	20.0	5
Three Harbors Trucking	Trucking operation	0	5.7	4
West Oakland Truck Repair	Truck repair	3,608	0.2	4
American Fumigation	Fumigation services	23,500	0.0	3
MetriTech	Port trucking services	560	0.0	2
Bridgeport	Trucking operation	0	1.4	1
Greyhound Lines	Equipment storage	0	1.0	1
Port Truck Customer Service Center	Port trucking services	39,818	0.0	1
Tacos Guanatos	Equipment storage	0	0.1	1
Port Materials Management Stockpile	Asphalt, concrete recycling	0	10.0	0
	PORT TOTAL	**283,896**	**57.4**	**323**
City Owned Properties				
California Department of Transportation	Lay-down, staging & on-site management of Eastern Span Replacement of San Francisco-Oakland Bay Bridge	0	26.0	200
Pacific Coast Container	Warehouse storage and distribution	141,000	5.0	50
Oakland Film Center	Film production	58,345	3.0	40
Oakland Police Department	Training	94,000	0.0	30
Impact Transportation	Warehouse storage and distribution	86,446	2.0	15
Winter Shelter	Homeless shelter	10,000	0.0	14
Oakland Maritime Support Services	Maritime support services	0	16.2	12
Bridgeport Transportation	Trucking	56,875	1.3	10
URSI	Recycling	0	3.0	6
Sunshine Transport	Trucking	0	1.0	4
Foss Maritime	Marine services (refueling)	0	1.0	0
	CITY TOTAL	**446,666**	**58.5**	**381**
	ARMY BASE TOTAL	**730,562**	**115.9**	**704**

sq. ft. = square feet
ac. = acres

Source: City of Oakland Redevelopment Agency and Port of Oakland, August, 2011.

LSA

FIGURE 2-1

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Project Site

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2012 Oakland Army Base Project
Project Vicinity and Regional Location

SOURCES: GOOGLE MAPS; LSA ASSOCIATES, INC., 2012.

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LSA

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2012 Oakland Army Base Project Boundary

2002 Oakland Army Base Area Redevelopment Plan EIR Boundary

Oakland Army Base Boundary - City Owned Land; balance of project site is Port owned

Oakland Army Base Boundary

FIGURE 2-2

2012 Oakland Army Base Project

Army Base Boundaries

SOURCES: CITY OF OAKLAND, CEDA, 2012.

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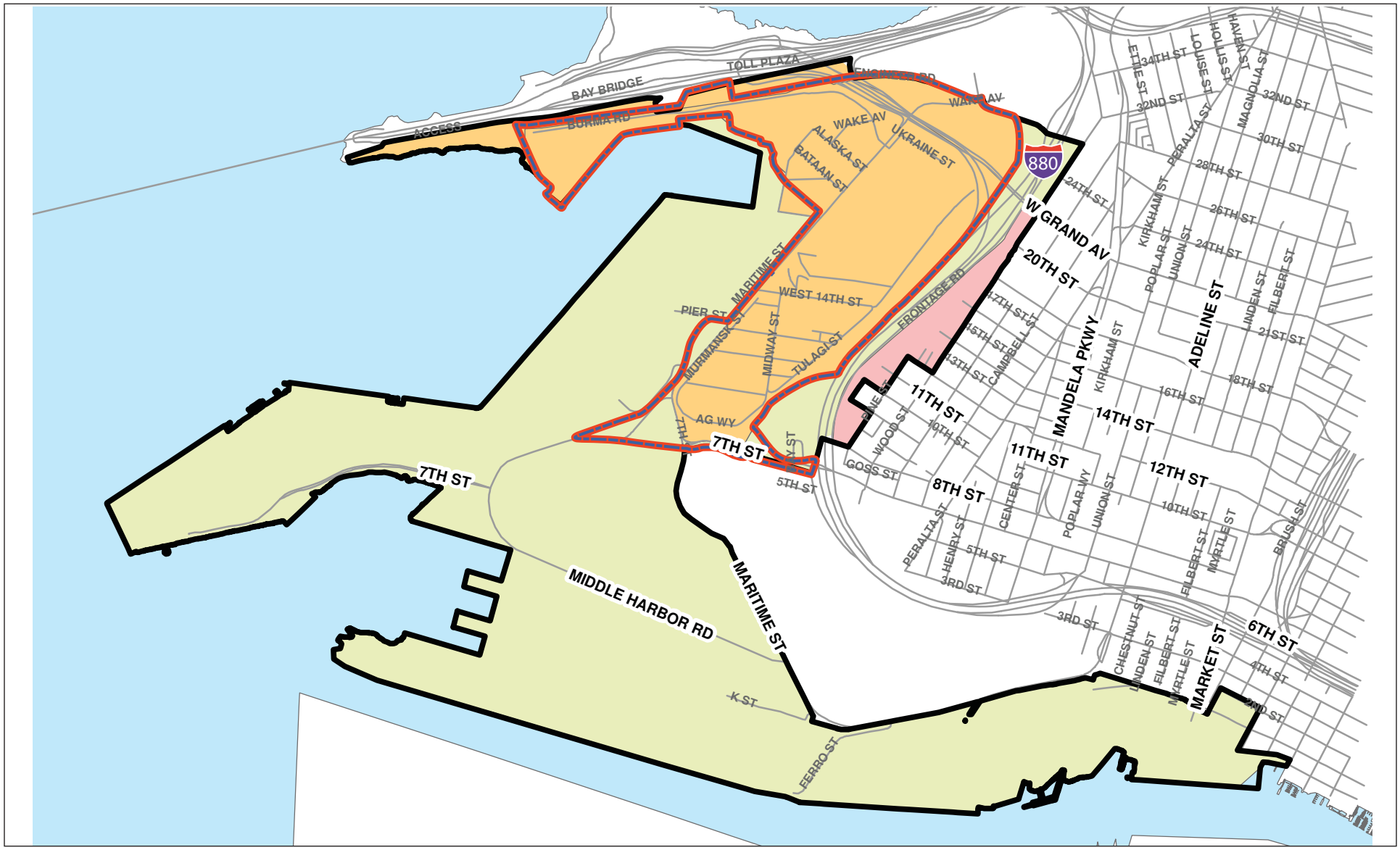

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FIGURE 2-3

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2012 Oakland Army Base Project Boundary

2002 Oakland Army Base Area Redevelopment Plan EIR Boundary

Sub-District: Oakland Army Base

Sub-District: Maritime

Sub-District: 16th/Wood

2012 Oakland Army Base Project
Project Boundary

SOURCES: CITY OF OAKLAND, CEDA, 2011.

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LSA

FIGURE 2-4

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0 800 1600
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Existing Billboards

2012 Oakland Army Base Project Boundary

2012 Oakland Army Base Project
Existing Land Use

SOURCES: GOOGLE EARTH, 2009; LSA ASSOCIATES, INC., 2012.

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2.3 PROPOSED PROJECT

The City and the Port of Oakland are considering redevelopment of an approximately 360.5-acre site, primarily within the bounds of what is known as the OARB Sub-District of the Oakland Army Base Redevelopment Area, specifically the Gateway Development Area and the Port Development Area. The activities contemplated, deemed the "2012 Oakland Army Base Project" would provide new, state-of-the-art facilities to support the international, national, regional and local movement of goods by way of the seaport, railroad and roadway networks. The currently proposed activities are a joint effort among the Port of Oakland and public-private partnerships between the City of Oakland, Prologis/CCIG, CASS and California Waste Solutions. The 2012 Project includes a Trade and Logistics Center that combines a Port of Oakland development program and a City of Oakland development program for the construction of new buildings (such as warehouse and distribution facilities) primarily to support cargo logistics uses (Figures 2-5a, -5b, -5c and -5d). The 2012 Project also includes nine billboards (Figure 2-6). In addition, the project includes an infrastructure program for roadway and railroad improvements to support the Trade and Logistics Center cargo distribution facilities (Figures 2-7 and 2-8), as well as water, sewer, storm drainage, telecommunications, security, gas, electrical and other utility improvements. The project will further implement the Redevelopment Plan. The 2012 Project elements are summarized in Table 2-3 and are described below.

2.3.1 Development Program

Port of Oakland Building Program, Maritime Logistics. The Port of Oakland would redevelop the southern approximately 175 acres of the project site with up to 882,880 square feet of maritime related logistics uses and activities, including container cargo storage and movement, container freight stations, deconsolidation facilities, truck terminals, and regional distribution centers to serve cargo passing through the seaport and through the proposed rail terminal. The nature of the activities would be related to waterborne commerce moving through Oakland. The warehouses and truck terminals would be large scale simple geometric structures. Flat or slight shed sloped rooflines would be typical, with a 30- to 60-foot height limit, depending on the building function.

Port of Oakland Building Program, Truck Parking. The Port committed in its 2001 application to BCDC for Seaport Plan and Bay Plan amendments that it would provide 15 acres of land in the Port area for truck parking. This parking remains part of the 2012 Project.

City of Oakland Building Program. The City of Oakland would redevelop the northern approximately 158.1 acres of the project site with logistics facilities, and either a marine terminal or research and development and open space uses as described below.

City Logistics (Central and East Gateways). Approximately 96.7 acres of the project site south of West Grand Avenue are anticipated to be redeveloped with approximately 979,620 square feet of logistics facilities, rapid deployment centers, and regional distribution centers. The nature of the activities would be derived from overall demand and market needs. The warehouses and truck terminals would be large scale simple geometric structures. Flat or slight shed sloped rooflines would be typical, with a 30 to 60-foot height limit, depending on the building function.

In this area, between proposed West Burma Road and West Grand Avenue, approximately 10 acres would be provided for truck services, including 36,850 square feet of buildings for truck parking and

services, including a bio-diesel fueling station, weighing stations, training and certification facilities, maintenance facilities, and retail.

City North Gateway. Approximately 27.3 acres north of West Grand Avenue would be reserved for up to 379,610 square feet of use for indoor recycling facilities. This area is not under negotiations with Prologis/CCIG. In addition, approximately 7 acres would be provided for a truck parking area; this area may include a fueling station, which may be biodiesel. It is anticipated that the operation of this area would be integrated with the 10 acres of ancillary maritime services in the Central Gateway. The recycling buildings would be large scale simple geometric structures. Flat or slight shed sloped rooflines would be typical, with a 30- to 60-foot height limit. The recycling operations would be industrial operations for the collection and processing of a variety of recyclable materials, including metals. One of the facilities would include a remelting furnace for the melting of alloys.

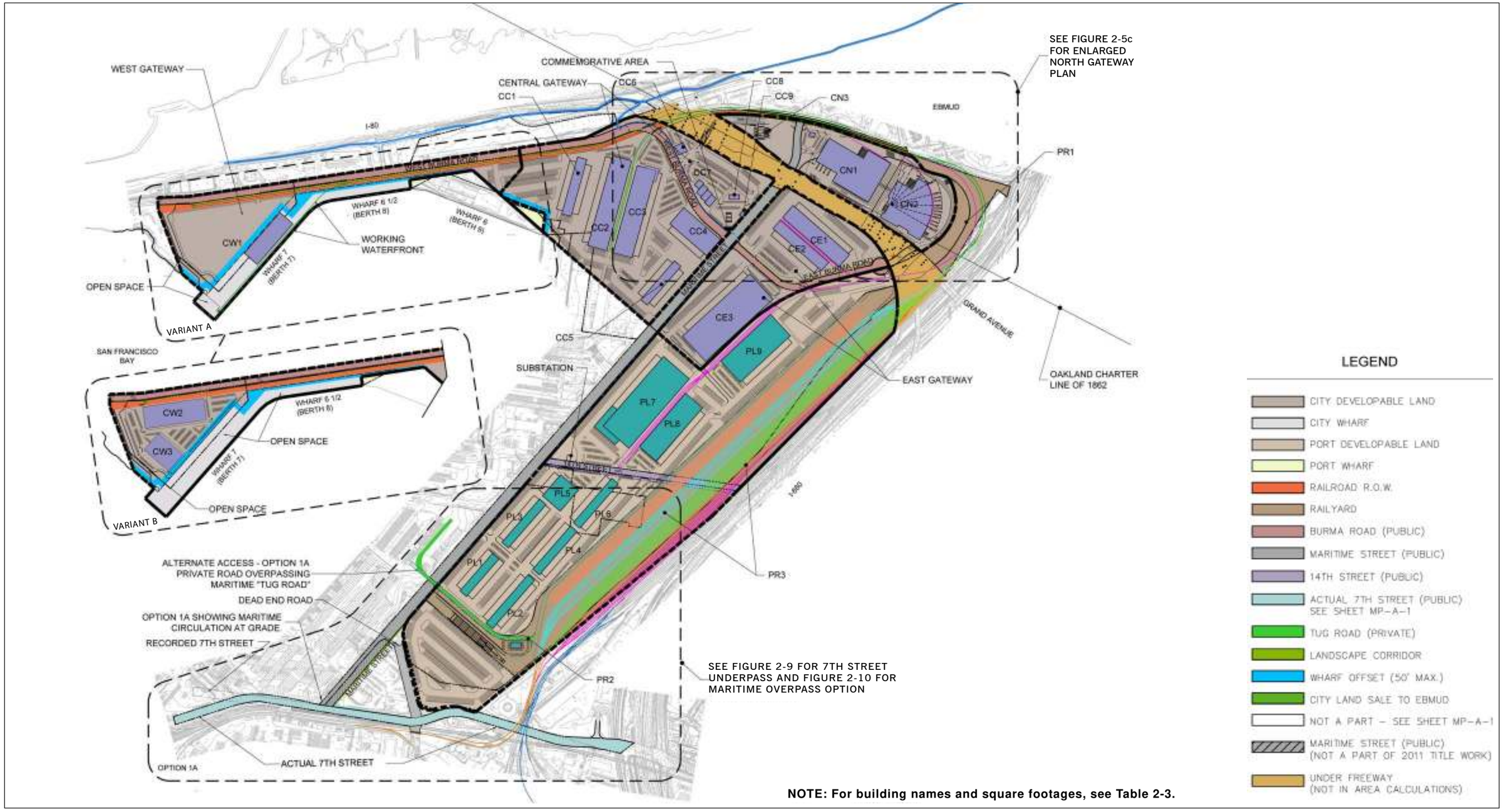
City West Gateway Working Waterfront - Variant A. The working waterfront variant would maintain the existing uses on the 34.1-acre area at the northwest edge of the site. Cargo would move directly between ships and rail. Export cargo would consist of non-containerized bulk goods, and inbound cargo would consist primarily of oversized or overweight cargo unable to be handled on trucks, and thus transferred directly from ships to rail. This facility, called the Oakland Bulk and Oversized Terminal, would operate on a 24 hour per day basis and is anticipated to handle up to six 50-car trainloads per day in each direction (for a total of 12 movements per day), plus occasional one- and two-car manifest moves. Specifically, the facility is anticipated to handle up to three "unit trains" per day with each "unit train" being 6,400 feet long with 100 cars and is broken into two fifty-car trainload sections of about 3,200 feet each, which are moved in/out of the West Gateway Marine Terminal.

It is estimated that these volumes would serve one "panamax" vessel call per week. Modern panamax designs are typically 950 feet in overall length and 65,000 to 80,000 deadweight tonnage in size. The facility would be open twenty-four hours per day and employ up to an estimated 60 International Longshore and Warehouse Union (ILWU) dock workers. This area would continue to include storage yards for both cargo containers and bulk goods, and surface parking. This variant would also include the existing approximately 146,460 square-foot warehouse on Wharf 7. The warehouse is a large, 50-foot tall rectangular structure with a slight shed sloped roof.

As part of the proposed project, the existing Wharves 7 and 6½ (also known as Berths 7 and 8, respectively) were evaluated to determine the extent of necessary repairs (and their associated cost) for their continued use as a working waterfront.[19,20] The wharves have deteriorated over the past 60 years; however, the studies have shown that with routine repair the structures can continue to support the bulk shipping and rail uses.

[19] Although the development team refers to the wharves by their historic nomenclature ("wharf") and numbering, the Port of Oakland refers to the City's Wharves 7 and 6 ½ as Berths 7 and 8, respectively.

[20] Jacobs, 2010. Preliminary Conditions Assessment and Evaluation of Army Wharves 6½ and 7. Prologis/CCIG has selected Option 1/Limited Action is the proposed use and as such only repairs for safety and maintenance would be required.



NOTE: For building names and square footages, see Table 2-3.

LSA

FIGURE 2-5a

N

0 600 1200
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2012 Oakland Army Base Project
Site Plan

SOURCE: ARCHITECTURAL DIMENSIONS, MARCH 2012.

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TO EMERYVILLE
BRIDGE TO I-80 ABOVE
TO BAY BRIDGE
RAIL GATE
EBMUD
CITY TRUCK PARKING (APPROXIMATELY 13.5 AC NOT INCLUDING UNDERPASS)
I-80
WEST BURMA ROAD
PEDESTRIAN ACCESS TO WHARF OPEN SPACE
WHARF 6 1/2 (BERTH 8)
WHARF 8 (BERTH 9)
WORKING WATERFRONT
OAKLAND CHARTER LINE OF 1852
RAIL LINES
WHARF 7 (BERTH 7)
EAST BURMA RD
SAN FRANCISCO BAY
VARIANT 2A
CITY TRUCK PARKING (APPROXIMATELY 6.3 AC)
GRAND AVENUE
COMMEMORATIVE AREA
RAIL ACCESS TO TRANSLOAD FACILITY
PORTS AMERICA ENTRANCE GATE
RAIL GATE
MARITIME STREET
PORT TRUCK PARKING (APPROXIMATELY 5.9 AC)
TRUCK LOADING, TYP.
WHARF 6 1/2 (BERTH 8)
CAR PARKING
7TH STREET
OPEN SPACE
TRUCK LOADING, TYP.
WHARF 7 (BERTH 7)
(N) RAIL YARD
PEDESTRIAN ACCESS TO WHARF OPEN SPACE
I-880
TRUCK GATE FOR NEAR DOCK TERMINAL
(N) NEAR DOCK INTERMODAL TERMINAL
VARIANT 2B
PORTS AMERICA EXIT GATE
PORT TRUCK PARKING (APPROXIMATELY 15.1 AC)
(N) KNIGHT YARD
OPTION 1A SHOWING MARITIME CIRCULATION AT GRADE
DEAD END ROAD
(N) SUPPORT YARD
RECORDED 7TH STREET
(N) JIT LEAD TRACKS
TO MIDDLE HARBOR SHORELINE PARK
MARITIME STREET
ALTERNATE ACCESS - OPTION 1A PRIVATE ROAD OVERPASSING MARITIME. "TUG ROAD"
SEE FIGURE 2-9 FOR 7TH STREET UNDERPASS AND FIGURE 2-10 FOR MARITIME OVERPASS OPTION
7TH STREET
UNION PACIFIC PROPERTY
OPTION 1A
(E) RAIL
TO DOWNTOWN OAKLAND

LEGEND

- PROPOSED HORIZONTAL VEHICLE TRAFFIC
- EXISTING VEHICLE TRAFFIC
- PROPOSED VEHICLE TRAFFIC
- EXISTING CLASS 1 BIKE ROUTE
- PROPOSED CLASS I OAB BIKE PATHS
- PROPOSED CLASS 1 CALTRANS BIKE PATH, BY OTHERS
- PROPOSED OAB CLASS 3 BIKE ROUTE
- EXISTING SIDEWALK
- PROPOSED SIDEWALK

LSA

FIGURE 2-5b

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0 600 1200
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2012 Oakland Army Base Project
Circulation Plan

SOURCE: ARCHITECTURAL DIMENSIONS, MARCH 2012.

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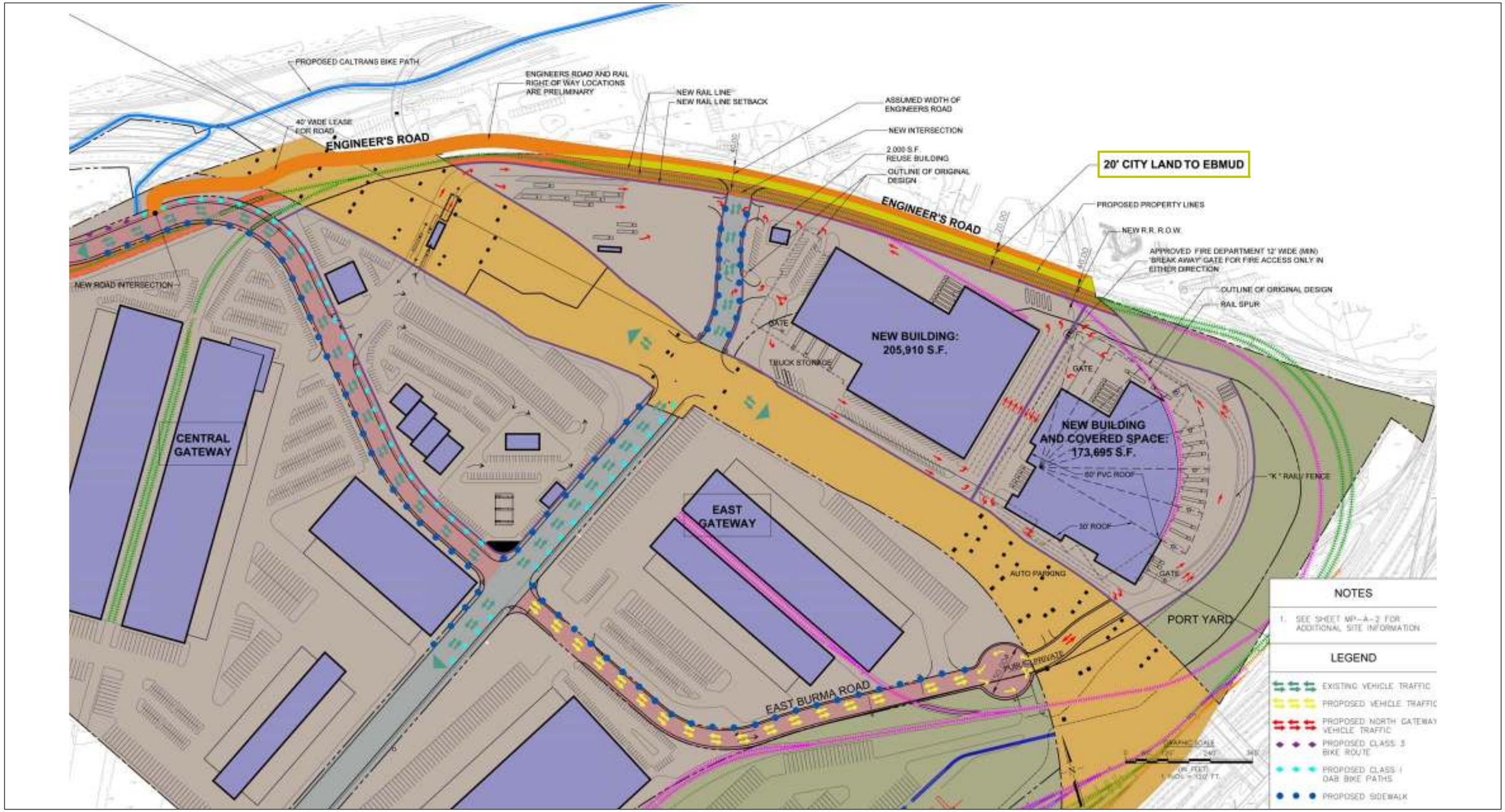

LSA

FIGURE 2-5c

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0 180 360
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2012 Oakland Army Base Project
Circulation Plan –
Enlarged North Gateway Area with Realigned Wake Avenue

SOURCE: ARCHITECTURAL DIMENSIONS, MARCH 2012.

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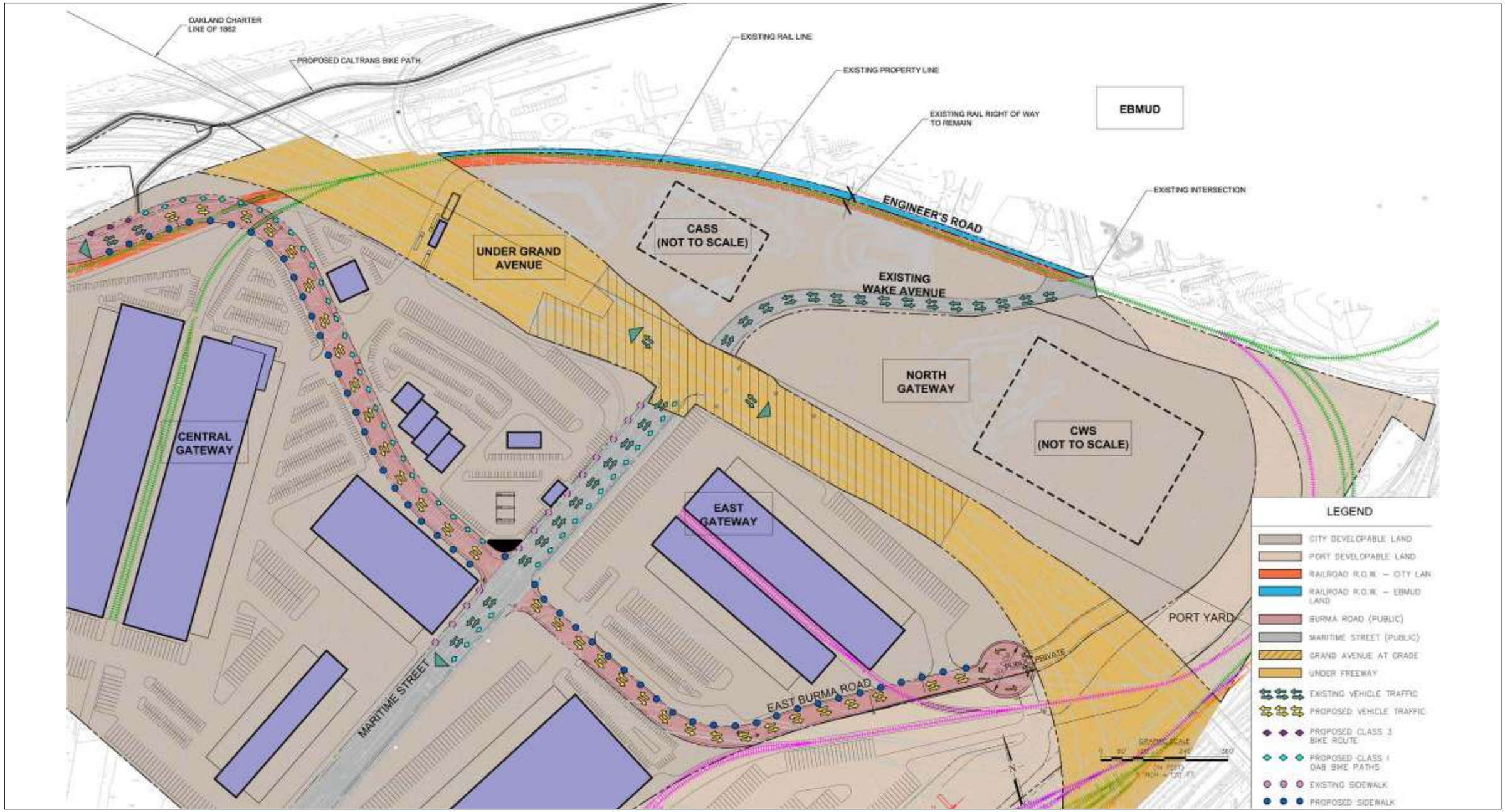

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FIGURE 2-5d

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0 180 360
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SOURCE: ARCHITECTURAL DIMENSIONS, APRIL 20, 2012.

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2012 Oakland Army Base Project

Circulation Plan –
Enlarged North Gateway with Existing Wake Avenue

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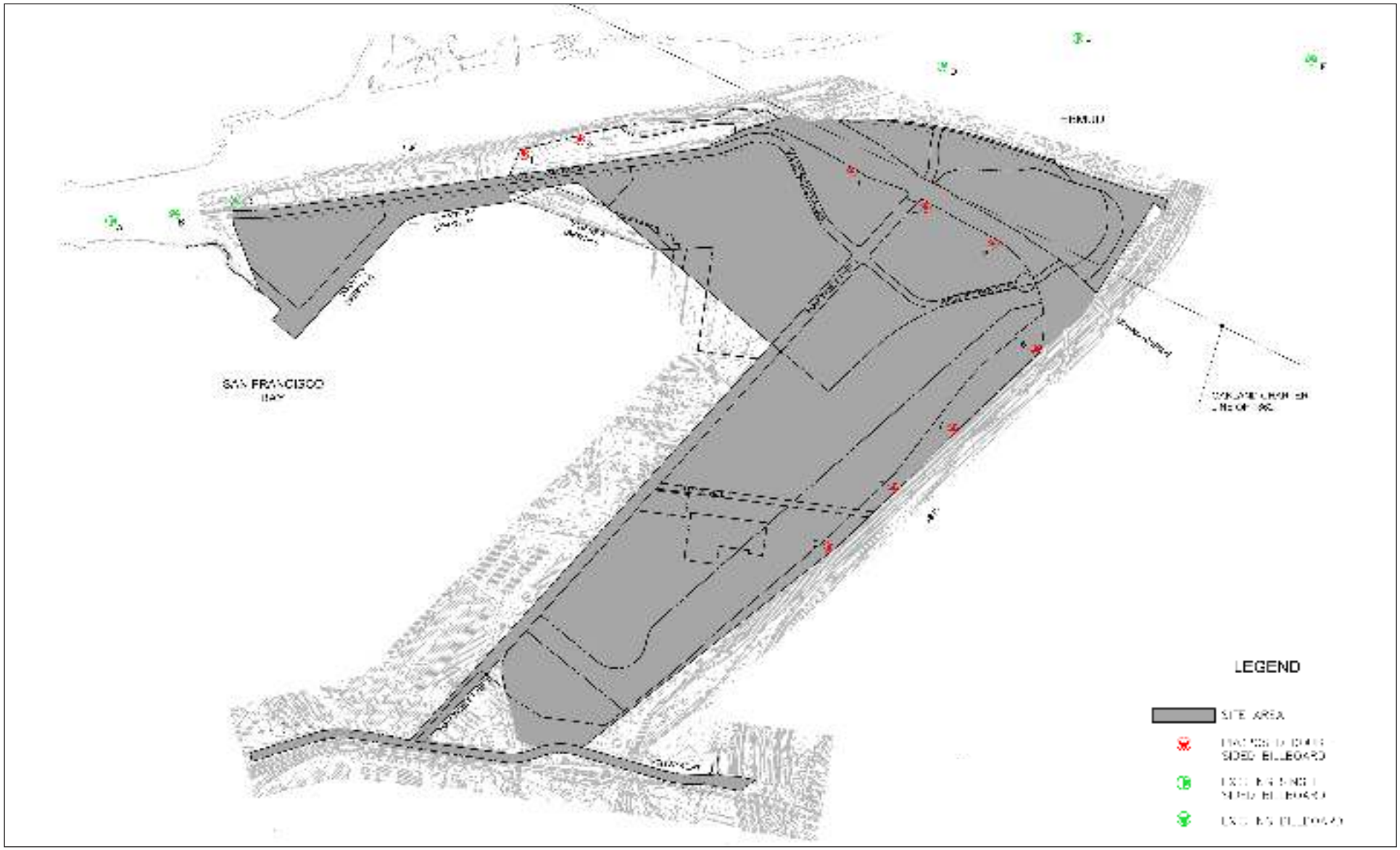

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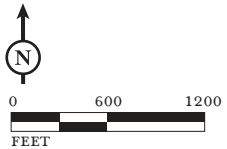

BILLBOARDS				
NUMBER	BILLBOARDS LOCATION	SIZE	SIDES	DISPLAY TYPE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	I-880 West Grand 500 North of Vernon — West Line, North & South Face	14 ft X 48 ft	2	Back
4	I-880 West Grand Seven of Vernon — West Line, North & South Face	14 ft X 48 ft	2	LED
5	I-880 West Grand [illegible] South of Vernon — West Line, North & South Face	14 ft X 48 ft	2	Back
6	I-880 West Grand [illegible] North of Vernon — West Line, North & South Face	14 ft X 48 ft	2	LED
7	I-880 at 19th Street — West Line, North & South Face	14 ft X 48 ft	2	Back
8	I-880 at 14th Street — West Line, North & South Face	14 ft X 48 ft	2	Back
9	I-880 at 10th Street — West Line, North & South Face	14 ft X 48 ft	2	LED

FIGURE 2-6

2012 Oakland Army Base Project

Proposed Billboards

SOURCE: ARCHITECTURAL DIMENSIONS, 2011.

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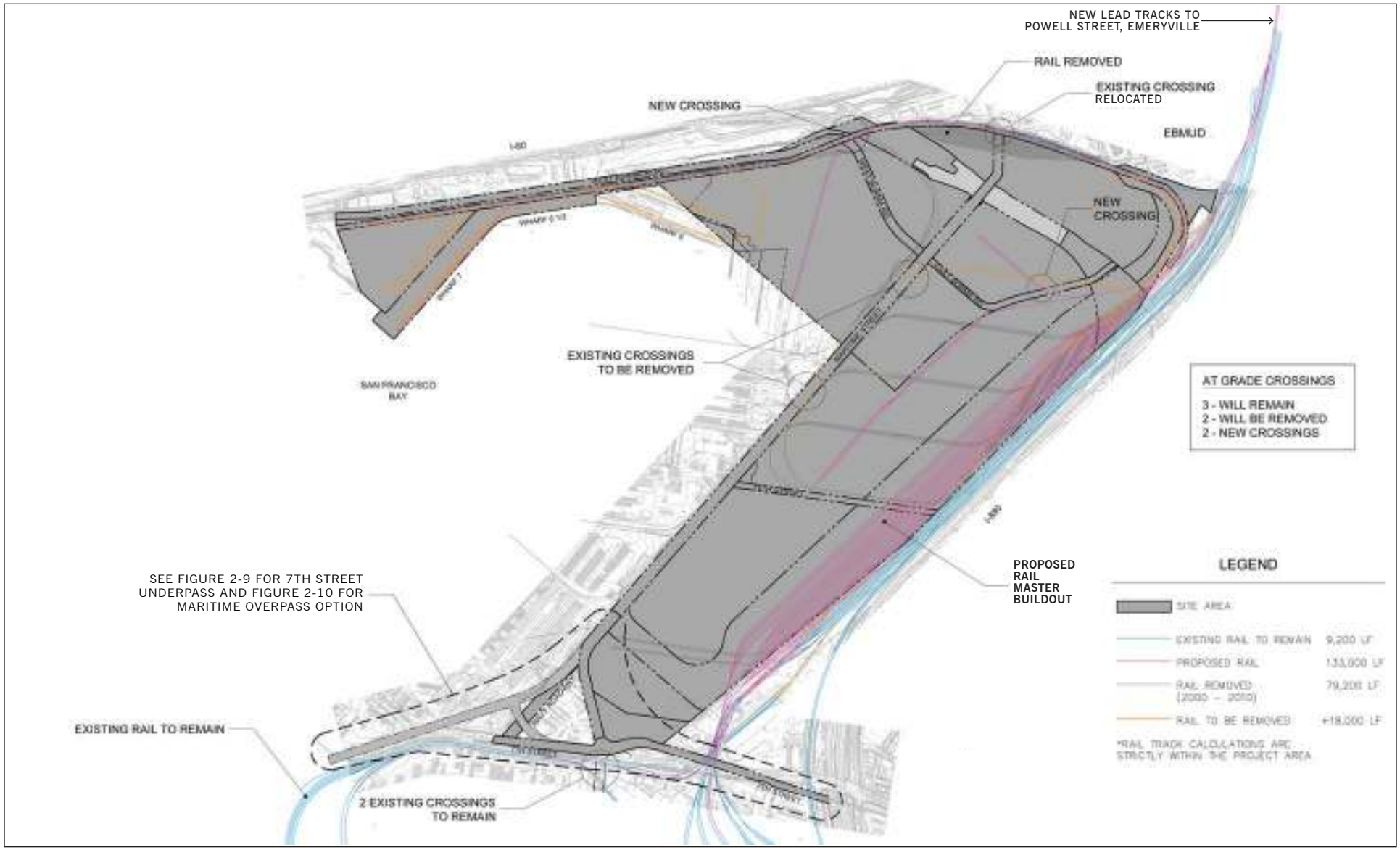

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FIGURE 2-7

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0 600 1200

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SOURCE: ARCHITECTURAL DIMENSIONS, 2011.

2012 Oakland Army Base Project

Existing and Proposed Rail Network

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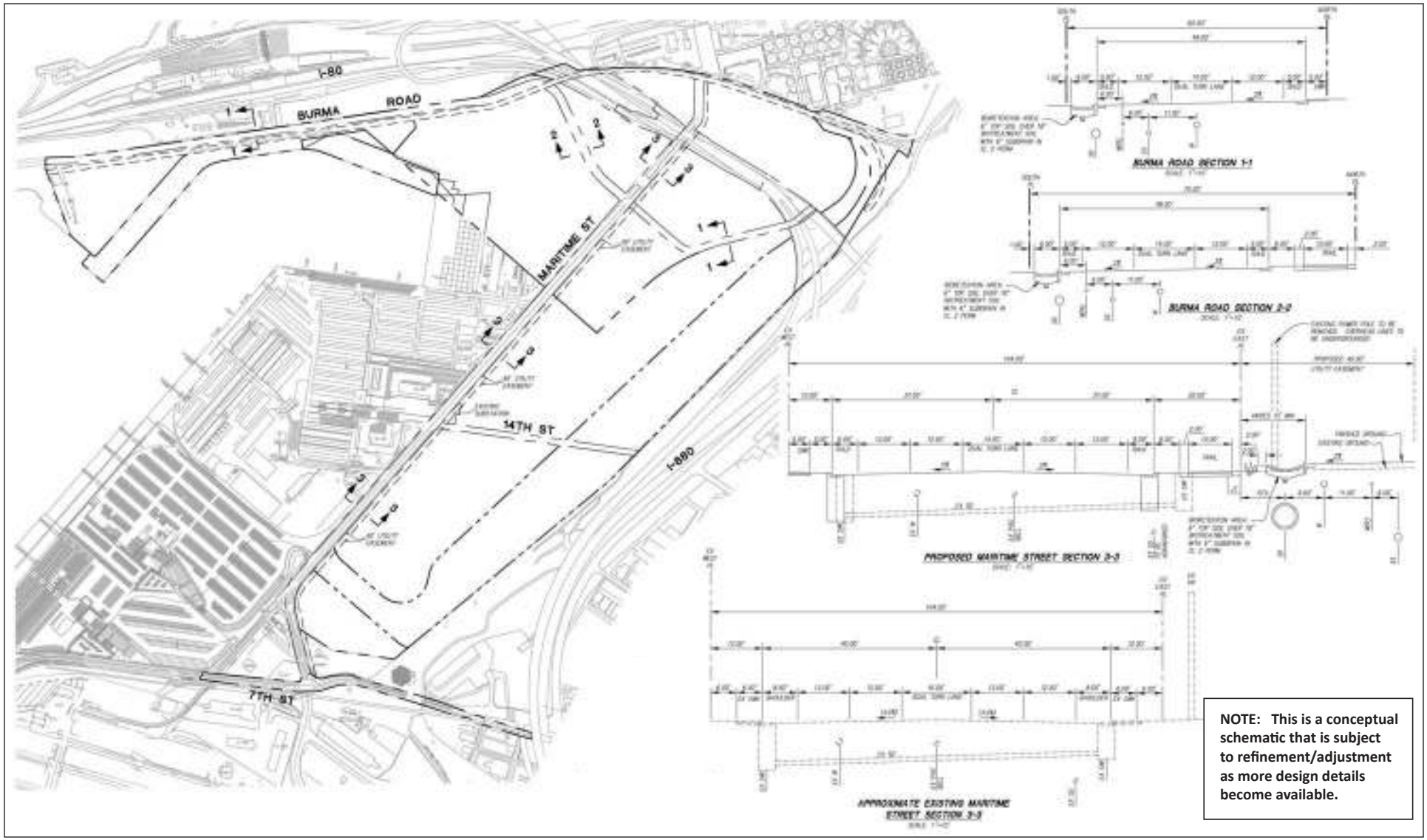

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FIGURE 2-8

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0 600 1200
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SOURCE: ARCHITECTURAL DIMENSIONS, 2011.

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2012 Oakland Army Base Project

Street Sections

Table 2-3: Proposed 2012 Oakland Army Base Project

PROJECT AND BUILDING AREAS				
	Total Land [a]		Building	
City Area (in Record Boundary)	Square Feet	Acres	Square Feet	FAR
CW (West Gateway)				
Variant A	1,485,400	34.1	146,460	0.171
CW1 - BULK WAREHOUSE	497,400	11.4	146,460	
WHARF 6 1/2 & 7	360,300	8.3		
WHARF OFFSET (50' MAX.)	117,400	2.7		
OPEN SPACE	118,000	2.7		
BURMA ROAD WEST	235,500	5.4		
LANDSCAPE CORRIDOR	32,600	0.7		
RAIL R.O.W.	124,200	2.9		
Variant B	1,485,400	34.1	175,000	0.352
CW2 - R & D	497,400	11.4	115,000	
CW3 - R & D			60,000	
Wharf Offset (50' Max.)	64,200	1.5		
Open Space (Wharf 6 1/2 & 7)	531,500	12.2		
Burma Road West	235,500	5.4		
Landscape Corridor	32,600	0.7		
Rail R.O.W.	124,200	2.9		
CC (Central Gateway)	2,774,700	63.7	537,060	0.234
CC1 - Transload Warehouse	2,290,300	52.6	49,550	
CC2 - Transload Warehouse			160,080	
CC3 - Transload Warehouse			161,120	
CC4 - Transload Warehouse			91,000	
CC5 - Transload Warehouse			38,460	
CC6 - Truck Services			8,010	
CC7 - Truck Services			22,220	
CC8 - Truck Services			4,240	
CC9 - Truck Services			2,380	
Maritime Street	182,120	4.2		
Burma Road West	195,550	4.5		
Landscape Corridor	27,880	0.6		
Wharf 6 Offset (50' Max.)	26,900	0.6		
Rail R.O.W.	51,950	1.2		
CN (North Gateway)	1,189,700	27.3	380,440	0.352
CN1 - Recycling Facility	1,081,000	24.8	205,910	
CN2 - Recycling Facility			173,700	
CN3 - Truck Services			830	
Maritime Street	35,100	0.8		
Landscape Corridor	5,100	0.1		
Rail R.O.W.	68,500	1.6		
CE (East Gateway)	1,439,600	33.0	442,560	0.343
CE1 - Transload Warehouse	1,289,000	29.6	105,000	
CE2 - Transload Warehouse			63,000	
CE3 - Transload Warehouse			274,560	
Burma Road East	111,700	2.5		
Landscape Corridor	38,900	0.9		
Subtotal City Area - Variant A	**6,889,400**	**158.1**	**1,506,520**	**0.273**
Subtotal City Area - Variant B	**6,889,400**	**158.1**	**1,535,060**	**0.298**

Table 2-3 *Continued*

Port Area (in Record Boundary)	Total Land [a]		Building Square Feet	FAR
	Square Feet	Acres		
CC (Central Gateway)	61,000	1.4		
Developable Land	12,700	0.3		
Wharf 6	39,400	0.9		
Wharf 6 1/2	8,900	0.2		
PL (Port Logistics)	7,570,800	173.8	882,880	0.210
PL1 - Transload Warehouse	4,204,550	96.5	37,190	
PL2 - Transload Warehouse			44,400	
PL3 - Transload Warehouse			42,980	
PL4 - Transload Warehouse			42,980	
PL5 - Transload Warehouse			57,200	
PL6 - Transload Warehouse			43,930	
PL7 - Transload Warehouse			302,800	
PL8 - Transload Warehouse			138,600	
PL9 - Transload Warehouse			172,800	
PR1 - Railyard	303,700	7.0		
PR2 - Tug Road	44,300	1.0		
PR3 - Railyard	2,360,700	54.2		
Maritime Street	432,200	9.9		
Burma Road (East)	4,500	0.1		
14th Street Utility Corridor	146,900	3.4		
7th Street Grade Separation[a]	9,250	0.2		
Landscape Corridor	64,700	1.5		
Subtotal Port Area	**7,631,800**	**175.2**	**882,880**	**0.210**

Project Area [b] (in Record Boundary)	Total Land [a]		Building Square Feet	FAR
	Square Feet	Acres		
Total Area - Variant A	**14,521,200**	**333.3**	**2,389,400**	**0.245**
Total Area - Variant B	**14,521,200**	**333.3**	**2,417,940**	**0.258**

Other Area	Total Land [a]		Building Square Feet	FAR
	Square Feet	Acres		
Under Freeway [b]	588,000	13.5		

Summary of Project Area	Total Land [a]	
	Square Feet	Acres
Project Area [ab]	**14,521,200**	**333.3**
Under Freeway [bc]	**588,000**	**13.5**
West Grand Avenue At Grade [bc]	**230,000**	**5.3**
Maritime Street [cd]	**53,200**	**1.2**
7th Street Owned By UPRR [de]	**213,000**	**4.9**
7th Street Owned By Port [de]	**98,300**	**2.3**
Total Project Area	**15,703,700**	**360.5**

[a] 7th Street Grade Separation will require additional property outside the OARB record boundary area.
[b] Roads and rail R.O.W. are not included in Gateway Area calculations.
[c] Proposed land to EBMUD from City North Gateway Area
[d] Berth 9 (Wharf 6) is Port property and reserved for future New Berth 21 (cumulative project).
[e] Area with only parcel number and owner information per record boundary prepared by RJA, Dated January 31, 2012 .

Table notes continued on next page.

Notes:
– Acreages and square footage subject to final design modifications
– Acreages do not include property associated with the billboards to the north, and the other Port property west of Maritime Street associated with the tug road.
– The acreages listed above do not include a 3-acre site for Painters and Decorators Joint Apprenticeship Training Committee of the Bay Area, Inc. (JATC). An April 30, 2005 agreement between the Oakland Base Reuse Authority (OBRA) and the JATC requires that the City (as successor to OBRA) convey to JATC a 3-acre parcel on the Army Base for JATC's construction and operation of an apprenticeship training program. The City maintains that its obligation under the agreement is extinguished because: (1) JATC no longer exists; and (2) the claim of the Northern California Journey & Apprentice Trust Fund that it has succeeded to JATC's interests under the agreement is invalid.

Source: Architectural Dimensions 2012. CEQA Supporting Documentation for Project Description, Oakland Army Base. March 14.

The 2012 Project includes minor maintenance repairs of existing Wharves 7 and 6 ½, possibly under existing shoreline maintenance agreements with the U.S. Army Corps of Engineers, the RWQCB and BCDC that are currently held by the Port. Additional permit authorizations would be obtained as needed. Repairs would be limited to the existing structures including, but not limited to, the piles, the structural retaining wall, the structural slab and related appurtenances. (Expansion or additions to the wharves are not part of the 2012 Project.) No dredging would be required for the continued operation of this wharf, beyond the occasional maintenance that already occurs.

Under Variant A there is proposed to be access to an approximately 1.0 acre portion of the existing wharf and approximately 1.7 acres of open space access to the wharf along the western edge of the West Gateway, connecting the proposed Gateway park to the southern most portion of the existing wharf.

City West Gateway Research and Development/Open Space - Variant B. Under this variant, approximately 175,000 square feet of research and development (R&D) use would be developed in the West Gateway area. The research and development structures would be up to 5 stories (55 to 75 feet) with various footprints. This development would occur after Caltrans vacates the site, once the new Bay Bridge construction is completed, projected after 2015. Under this variant, this facility would operate on a 24 hour basis, there would continue to be rail access south of West Burma Road and it is anticipated to handle up to two fifty-car trainloads per day in each direction (for a total of four movements per day), plus occasional one- and two-car manifest moves, as well as switching, storage, and transloading activities. Specifically, the facility is anticipated to handle up to 1 "unit train" per day with each "unit train" being about 6,400 feet long with 100 cars and broken into two fifty-car trainload sections of about 3,200 feet each, which are moved in/out of the West Gateway area to serve users in and near the OARB, and to provide support to the Port Rail Terminal.

As part of this variant, the existing 146,460 square-foot warehouse on Wharf 7 would be demolished and approximately 12.2 acres of public shoreline access would be provided on the northern portion of the project site along the Bay. No improvements would be made to the wharf under Variant B other than landscaping and access improvements on its surface. This waterfront open space is not part of the larger Gateway Park currently being planned by the Gateway Park Working Group, a consortium of nine agencies working together.[21] However, access from the wharf open space to the Gateway Park is included as part of the West Gateway Variant B.

[21] Participating agencies include the Bay Area Toll Authority (BATA), Caltrans, Bay Conservation and Development Commission (BCDC), California Transportation Commission (CTC), East Bay Regional Park District (EBRPD), City

Commemorative Area. Redevelopment of the Army Base has resulted in, and will continue to result in, the removal of buildings and wharves that contribute to the OARB Historic District. This district reflects a specific period in the history of West Oakland military transportation and operations. A commemorative area is proposed within the Central Gateway area, in the vicinity of the intersection of Maritime Street and Burma Road. The commemoration will include relocated physical elements of the OARB Historic District, along with appropriate monument(s) to memorialize the contributions of civilians and the military in the Bay Area to WW II, and the wars in Korea and Vietnam. As shown in the Circulation Plan (Figure 2-5b), the 2012 Project includes vehicular, pedestrian and bicycle access between the Commemorative Area to the proposed Gateway Regional Park and the Bay Trail.

Billboards. Up to nine billboards would be constructed as part of the proposed project (on both City and Port properties), as described in Table 2-4 and shown in Figure 2-6. (Existing billboards in the project vicinity are also shown on Figure 2-4 and the proposed billboards are also shown on Figure 3.1-1.) The billboards would be subject to the State of California's Outdoor Advertising Act (OAA) and regulations which regulate the size, illumination, orientation, and location of advertising displays within specified distances of highways. Billboards on Tideland Trust encumbered property must be consistent with State of California Tidelands Trust restrictions.

Table 2-4: Proposed Billboards

Number	Billboard Location	Size	Sides	Display Type
1	Bay Bridge 500' East of Toll Plaza – South Line, East & West Face	20'H x 60'W	2	LED
2	Bay Bridge 1000' East of Toll Plaza – South Line, West Face	20'H x 60'W	1	Backlit
3	I-880 West Grand 500' North of Maritime – West Line, North & South Face	14'H x 48'W	2	LED
4	I-880 West Grand South of Maritime – West Line, North & South Face	14'H x 48'W	2	Backlit
5	I-880 West Grand 500' South of Maritime – West Line, North & South Face	14'H x 48'W	2	LED
6	I-880 West Grand 1800' South of Maritime – West Line, North & South Face	14'H x 48'W	2	LED/Backlit
7	I-880 at 15th Street – West Line, North & South Face	14'H x 48'W	2	LED
8	I-880 at 14th Street – West Line, North & South Face	14'H x 48'W	2	Backlit
9	I-880 at 12th Street – West Line, North & South Face	14'H x 48'W	2	LED

Notes:

Backlit Display: Static translucent sign lit from behind, traditionally has two ad faces (front and back)

LED Display: Changeable digital sign comprised of LED bulbs, can have as many as 12 rotating digital ads

Source: Architectural Dimensions, 2012. CEQA Supporting Documentation for Project Description, Oakland Army Base. March 12.

Fueling Services. As described above, within the truck parking facilities, there would be fueling services, some of which are anticipated to be biodiesel.

2.3.2 INFRASTRUCTURE PROGRAM

As noted above, the proposed project would provide new, state-of-the-art facilities to support the Port of Oakland's primary mission as an international gateway for the movement of goods by way of the

of Oakland, Port of Oakland, East Bay Municipal Utility District (EBMUD) and Association of Bay Area Governments (ABAG) Bay Trail Project.

seaport, railroad and roadway networks. In conjunction with the elements of Development Project detailed above, the project includes an infrastructure program to support the seaport and the Trade and Logistics Center cargo distribution facilities, including rail lines, rail yards, roadways, and utilities. The infrastructure program is described below.[22]

Rail. The proposed project would include construction of a new intermodal terminal and new rail lines to support maritime uses (see Figures 2-5b, 2-5c and 2-7). Approximately 133,000 linear feet of rail would be added to the project site; approximately 97,200 linear feet would be removed. An estimated 23,610 linear feet of track would be dedicated to a near-dock intermodal yard, and approximately 30,770 linear feet of track would be designated a support yard for transloading, manifest, or switching activities to support the intermodal facility, the logistics facility, and the West Gateway marine terminal. The existing Knight Yard would be relocated to an area east of the support yard and is proposed to be used for transloading and manifest activities. Two little-used at-grade rail crossings on Maritime Street would be removed; one new crossing on Burma Road would be provided. One crossing, currently located at Wake and Engineers Road, would be relocated. The 2012 Project includes a Project Safety Program, which includes health and safety policies and procedures for working around railroad tracks, including live tracks, and on-track safety.[23] The former Oakland Army Base had extensive rail facilities (over 29 miles of railroad track, including those operated by the Port and private entities, such as Oakland Terminal Rail (OTR)) that, prior to Base closure, served all essential areas of the Base. The pier/wharf areas west of Maritime Street and the warehouse storage area east of Maritime Street were served by double tracks, which cross the main gate to EBMUD's Main Waste Water Treatment Plant. OTR itself handled about 1,559 trains in 1998.

Port of Oakland, Rail Terminal. The Rail Terminal consists of logistics uses described above and construction of an approximately 61.2-acre rail yard ("Rail Terminal") on the eastern portion of the project site. It is proposed to be operated by an independent operator. The Rail Terminal would be designed to accommodate trains carrying containers, as well as bulk and bulk liquid rail cars. Some of the bulk and bulk liquid rail cars would be unloaded into empty containers on site and then moved to a marine terminal for export by ship. However, most of the bulk cars would be moved via rail to the West Gateway's Oakland Bulk and Oversized Terminal. The Rail Terminal would be constructed in two or more phases and may include the following elements:

- Truck and employee entrance and exit gates;
- Truck connection and track connections to the Outer Harbor marine terminals, the proposed Trade and Logistics Center, the proposed Oakland Bulk and Oversized Terminal, and the JIT;
- Loading tracks and storage tracks, lead tracks connecting to Union Pacific's mainline north of West Grand Avenue to Powell Street, within the existing UPRR right-of-way and parallel to existing tracks, and connecting tracks to both Union Pacific's and BNSF's existing intermodal terminals (UP Railport and JIT, respectively); and

[22] Unless otherwise determined by City or Port engineers, all infrastructure will be designed and built in accordance with current City standards, including without limitation: all traffic signals and traffic control devices within the Oakland Army Base and on connecting arterial streets serving the Oakland Army Base shall include Intelligent Transportation Systems (ITS) elements, such as traffic signals interconnected via fiber optic cable, PTZ (pan/tilt/zoom) monitoring cameras, transit signal/emergency vehicle pre-emption devices and communication infrastructure equipment, capable of connecting to the City's Traffic Management Center, as described in the City's Intelligent Transportation Systems (ITS) Master Plan (2002), or most recent version.

[23] Turner Construction Company, 2011. Project Safety Program.

- Operating equipment such as rubber tired gantry cranes and top picks, upgradeable to wide-span rail mounted cranes across multiple tracks.

The Rail Terminal in conjunction with the proposed logistics uses would improve the circulation of cargo throughout the seaport. With implementation of the proposed project, it is anticipated that the Port will be able to meet its share of regional cargo throughput in 2020, as identified in the Seaport Plan.

Other Rail Lines. As shown in Figure 2-7, additional rail spurs would be constructed on the site to provide access to the proposed logistics uses, such as storage warehouses and distribution centers.[24] A rail line would run south of West Burma Road providing rail access to the West Gateway area. Under the Working Waterfront Variant, a spur line would be provided to Wharf 7. The existing rail line along the northern boundary of the project site would be moved south by approximately 20 feet, a parallel line would be constructed, and spur lines would provide rail access to the Central and East Gateway areas.

Roads. Several roadways would be improved or realigned, meeting current standards, as part of the proposed project. Figure 2-8 shows the proposed cross sections for two of these projects, Maritime Street and Burma Road.

Maritime Street. Maritime Street extends the entire length of the project site. It will be improved as part of the proposed project, with intersection controls, bicycle/pedestrian paths, minor reconfiguration, repaving and landscaping. South of West Grand Avenue, Maritime Street would continue to provide two lanes of traffic in each direction and a center dual-turn lane. A sidewalk would be provided on the west side of the street and a Class I bike trail would be provided on the east side of the street.

North of West Grand Avenue, the existing Wake Avenue would be realigned as an extension of Maritime Street to maintain access to the EBMUD MWWTP. This roadway section north of West Grand Avenue would have two lanes of traffic in each direction and five-foot shoulders in either direction. Should the existing Wake Avenue not be able to be relocated to the preferred new location, as a variant to the preferred plan, Wake Ave would be rebuilt in approximately the same location as it currently enters the EBMUD lands (see Figure 2-5d). With this variant the two recyclers would have to be sited one to the east and one to the west of Wake Avenue.

Utilities are currently located within the Maritime Street right-of-way. As part of the proposed project, new and existing utilities may be constructed in a utility easement to the east of Maritime Street or may be located within the existing right of way under Maritime Street.

The existing traffic signals at the intersection of Maritime Street with Burma Road and Bataan Avenue would be removed. New traffic signals are proposed at the Ports America exit gate and the realigned Burma Road. Existing driveways would be maintained to access uses adjacent to the project site, new driveways would be provided within the project site as needed to provide access and improve traffic circulation.

[24] In Figure 2-7, new rail lines outside of the project boundaries are within the existing Union Pacific right-of-way and are parallel to existing tracks.

Changes to Maritime Street at 7th Street are discussed below, under 7th Street and Related Access Improvements.

Burma Road. Burma Road currently extends from approximately Wharf 6½ east to Maritime Street. As part of the proposed project, Burma Road west of Maritime Street would extend to the western edge of the project site. The portion of the roadway closest to Maritime Street would be realigned to create usable parcels south of West Grand Avenue. A new section of Burma Road would be constructed from Maritime Street east to the vicinity of West Grand Avenue. Burma Road would provide one lane of traffic in each direction and a center dual-turn lane. West of Maritime Street, Burma Road would include a trail on the north side of the road. East of Maritime Street, Burma Road would include a sidewalk on the north side of the road. Utilities would be located within the Burma Road right-of-way.

Engineers Road. The City and EBMUD are considering modifications to the City's and EBMUD's lands that would result from relocating Wake Avenue to the west, as illustrated in Figure 2-5c, and moving the existing Oakland Terminal Railroad right-of-way, 20 feet to the south. Should those two facilities be relocated, it would make possible the widening of EBMUD's private Engineers Road, along the southern border of the EBMUD property, from 20 feet to 40 feet. In addition to facilitating the widening of Engineers Road, the relocation of Wake and the railroad right-of-way, the City would grant EBMUD an easement/lease permitting them to build an Engineers Road extension westward under the West Grand Avenue Freeway structure connecting to Burma Road, providing EBMUD with a second means of entry and exit.

Should the existing Wake Avenue not be able to be relocated to the preferred new location, as a variant to the preferred plan, Wake Avenue would be rebuilt in approximately the same location as it currently enters the EBMUD lands. With this variant the two recyclers would have to be sited one to the east and one to the west of Wake Avenue.[25]

7th Street and Related Access Improvement. 7th Street is at the southern boundary of the project site. It is a four-lane arterial roadway that provides access from I-880 and the neighborhood of West Oakland to the Port's Outer and Middle Harbor marine terminals, the Maritime Support Center, the JIT, the UP Railport Oakland, UP West Oakland Railyard, Port View Park, and Middle Harbor Shoreline Park (MHSP). From Bay Street to Maritime Street, 7th Street is generally at-grade, but utilizes an approximately 180-foot long bore below the rail lines. As part of the proposed project, the eastern portion of 7th Street would be rebuilt, but would keep its existing alignment and would continue to be depressed below the rail lines that connect the BNSF and Union Pacific terminals to the new expanded rail lines of the OHIT (Figure 2-9). Two lanes of travel would continue to be provided in each direction; however, the travel lanes would be widened, and a median, shoulders and bicycle and pedestrian path would be added. In addition, the clearance height of the bore would be would be increased and the existing rail bridge over 7th Street would be replaced. Two variants for improvements to the west end of 7th Street are being considered.

[25] This Initial Study/Addendum analyzes the relocation of Wake Avenue to the west, the preferred new location, it does not analyze separately the variant of Wake Avenue being rebuilt in approximately its existing location except for traffic (see Section 3.16, Transportation/Traffic). With the relocation of Wake Avenue, slightly larger recycling facilities would be constructed, providing for a more conservative CEQA analysis, although the amount of parking would increase if Wake Avenue remained in its current location.

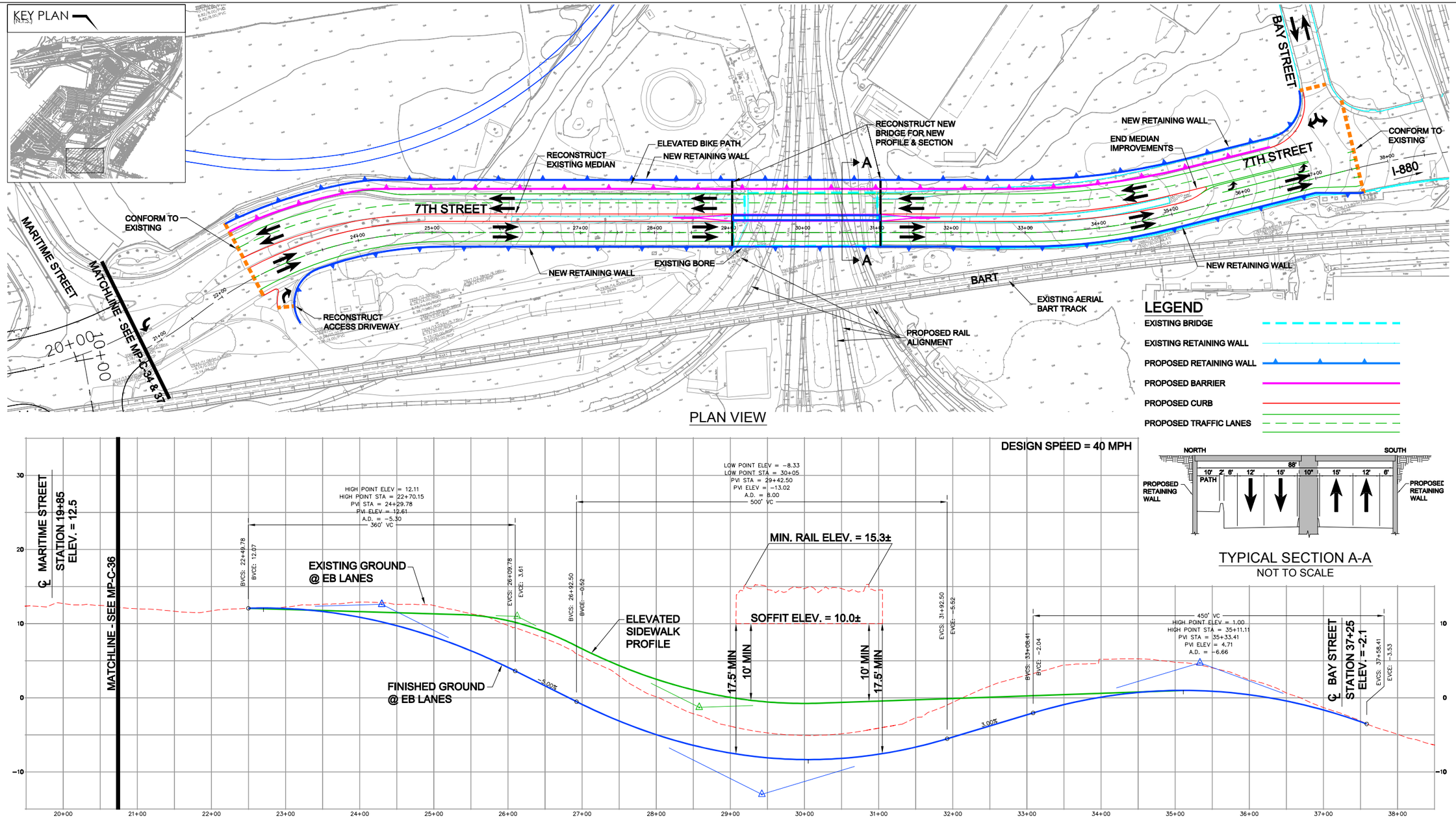

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FIGURE 2-9

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SOURCE: ARCHITECTURAL DIMENSIONS, JANUARY 2012.

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2012 Oakland Army Base Project

7th Street Rebuild Underpass

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- At-Grade 7th Street Variant: Under this variant, the southern 800 feet of existing Maritime Street would become a private drive and all traffic would be redirected down Navy Roadway to a three-way intersection at 7th Street (see Figures 2-5a and -5b).

  As part of the At-Grade Variant, a private tug road between the adjacent Outer Harbor marine terminals and the intermodal rail terminal is proposed as an alternative to truck movements across Maritime Street. The connection would be grade separated from Maritime Street, allowing containers to move securely between rail and marine operations without moving across the public street. Use of this connection would speed goods movement through the Port, and avoid additional congestion on Maritime Street. Goods movement across this connection would be available 24 hours a day, seven days a week, as opposed to the truck gates which are generally open only during business hours. Construction of this improvement is not anticipated to increase either the rail or marine terminal capacity at the Port.
- Maritime Street Overpass Variant: Under this variant, a new elevated, T-intersection of 7th Street and Maritime Street would be constructed (Figure 2-10). Navy Roadway would be demolished. This variant would allow a new surface rail connection between the proposed intermodal rail terminal and the existing JIT without an at-grade crossing on Maritime Street or 7th Street. As in the 7th Street At-Grade Variant, the southern 800 feet of existing Maritime Street would become a private drive. As part of the Overpass Variant, a private, secure at-grade tug road between the adjacent Outer Harbor marine terminals and the intermodal rail terminal is proposed.

Major utilities that are in conflict with the any of the proposed 7th Street, Maritime Street and related roadway improvements would be relocated.

Right-of-Way Land Acquisition. Roadway improvements or realignments included as part of the proposed project may require minor acquisition of right-of-way from Port or City tenants or adjacent landowners. The 7th Street grade separation project may require additional right-of-way from the Port, Caltrans, and Union Pacific Railroad. The project site also includes numerous existing tenants under lease or other agreement with the Port or City, including, but not limited to, Caltrans, Oakland Maritime Support Services, Pacific Coast Container, Impact Transportation, United Intermodal Services, and Industrial Railways. These tenants would be impacted by the construction work required for the proposed project, though many users are viewed as prospective tenants of the new development upon the project's completion.

Street Vacation. As part of the proposed project, streets may need to be vacated, including without limitation:

- The portion of 14th Street that would lie within the new Rail Terminal;
- Wake Avenue (would be replaced by an extension of Maritime Street to the north);
- Portions of the existing Burma Road that would be vacated as part of the new realignment;
- A portion of Maritime Street[26] south of the intersection with Navy Roadway and north of the intersection with 7th Street;
- As part of the 7th Street Overpass Variant, Navy Roadway and a portion of 7th Street; and
- Existing 7th Street easements currently out of alignment from existing roadway.

[26] This portion of Maritime Street may not need to be vacated since it appears that it was never formally dedicated.

Utilities. Much of the existing infrastructure throughout the project site is old, in disrepair and inadequate to serve the level and type of development that is proposed. New utility systems, such as water distribution (both domestic and reclaimed water), wastewater collection, stormwater collection, gas distribution, electrical systems, security, telecommunications and similar systems, would be constructed to meet current standards. As noted above, and as shown in Figure 2-8, a utility corridor is proposed along the east side of Maritime Street to supplement the existing utility corridor under Maritime Street, if necessary. Along East and West Burma Roads, utilities would be located under the streets. The existing stormwater system for the project site and surrounding area (that drains through the project site) includes nine outfalls to the Bay. The stormwater from the OARB lands east of Maritime Street would be channeled into two new stormwater pipes that would lead to one proposed new outfall at Berth 10. Utilities would be constructed underground, and underground utility connections would be made to proposed structures as they are developed. Where possible, connections would be located beneath paved roadways and walkways. Old utility systems would be demolished or abandoned in place when new systems come on line. Phasing of project construction and keeping certain buildings on the site will require construction of temporary utilities and also maintaining some existing utilities until such time that all buildings are replaced and/or new utilities are completed to serve old, existing buildings.

To the maximum feasible extent, old lateral lines in the former Oakland Army Base shall be identified, disconnected or abandoned in place to reduce inflow and infiltration flows to the existing 15-inch sewer line that connects directly into EBMUD. No new connections would be made to the existing 15-inch line. There are several existing sanitary pump stations on and off the project site along the existing path of the sanitary sewer. Depending on the final routing of the new sanitary sewer main laterals new pumps may be needed within existing stations and/or additional stations may be required. Phased construction of the project will drive the final determination of pump locations.

Electrical services are provided to the project currently by the Port and by PG&E, which provide power for the street lights and traffic signals on Maritime Street. The proposed project would construct new underground infrastructure to carry power around the site for delivery to future buildings and lands. Power would be provided from either the Port or PG&E depending on capacities and commitments of both power providers. Planning of the power infrastructure has been done to accept power from either the Port or PG&E. Currently, the Port has adequate capacity to provide electrical power for the entire proposed project. However, this situation could change depending on the electrical demand of current users. In that case, an additional substation would be required as part of the project. A new power source for such a substation would be required and the routing for this source, outside the scope of this project, has not been determined. The approximate yearly demand for power for the Army Base (Port and City lands) is currently estimated at 98,052 megawatt hours.

The approximate yearly natural gas demand for the OAB is currently estimated at 82,639,400 kBTUs. Gas will be delivered by new underground gas piping extending back to existing and new mains throughout the site. It is anticipated that new gas lines will be installed in utility corridors and that the capacities of existing mains will not increase due to the relatively low demands of the proposed land uses.

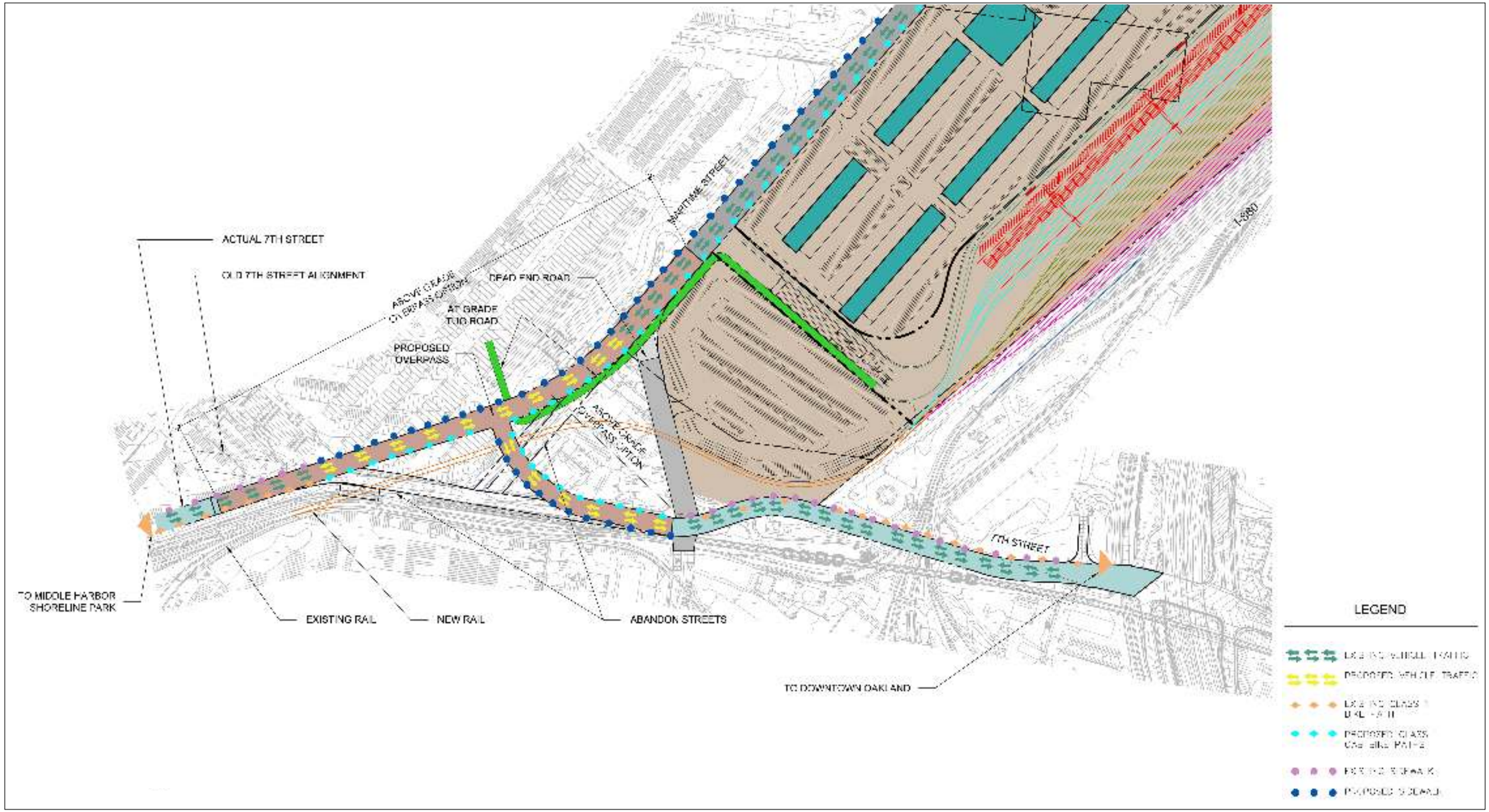

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FIGURE 2-10

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2012 Oakland Army Base Project

Circulation Plan - Maritime Overpass Option

SOURCE: ARCHITECTURAL DIMENSIONS, MARCH 2012.

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2.3.3 PROJECT CONSTRUCTION

Demolition. Demolition throughout the project site would consist of removing structures and pavement, and removing or capping old utility systems (sewer, storm drain, water, electrical, gas etc.). In addition, deconstruction and removal of several historic rated buildings would be required to accommodate the proposed new construction and/or infrastructure. The bulk of the buildings on the project site are wood-framed and wood-cladded warehouses. As part of the proposed project, as best practices allow, the wood from these buildings would be salvaged in compliance with the 2002 EIR Mitigation Monitoring and Reporting Program adopted by the City and Port.

Site Preparation. The geology underlying the project site consists mostly of sand, fill and mud. After years of self-settlement, the site has continuously lowered its top-of-grade elevations differentially. To enhance underlying soils to minimize future settlement and liquefaction during earthquakes and bring settled areas up to a new code conforming elevation, a site preparation process of deep dynamic compaction, import of soil, and surcharge and wicking is proposed as part of the project.

Deep Dynamic Compaction (DDC). In addition to the underlying Bay mud soils the upper portions of the site are laden with sand which is basically the fill material originally used to create the Army Base when the Bay was filled. The sand material originally came from dredging the Bay. Bay dredged material was used to fill the Bay to create the Army Base site. So the site has an upper strata of sand and lower levels, underneath the original Bay floor, of Bay Mud. The surcharging process, described below, remediates settlement of the Bay Mud, but the process of DDC is needed to compact the upper strata of sand.[27] DDC would compact the sand layer to where it solidifies to thwart liquid intrusion and hold its form as a solid that would support buildings and site improvements.

DDC operation consists of dropping a heavy weight repeatedly over a pattern defined by the Geotechnical recommendations. Current recommendations call for 10 50-toncranes dropping a 10-ton weight from 50 feet high on a site pattern of 16 square feet. However, future engineering may reduce the number of such locations, and the Developer may choose to only perform DDC underneath the proposed building sites. Multiple drops are usually required and it is assumed each crane will produce approximately 480 “drops” per shift. As part of the DDC operations, a bulldozer would smooth out the craters created by the dropped weights. Ultimately, the existing elevation of the site will compress by about one foot due to the DDC process. The import fill projections include material to make up the one foot “subsidence” caused by the DDC process.

Import and Surcharge of Soil. As shown in Table 2-5 and Figure 2-11, it is estimated that approximately 2 million cubic yards of fill would be required to bring the project site up to a new elevation that allows for compliance with current engineering regulations for stormwater flow[28] and anticipated sea level rise.

[27] This is critical as the upper sand layer is what becomes unstable during seismic events as earth shaking and vibrations causes mixing of ground water with the sand (liquefaction) making it unstable and unable to support buildings and utilities.

[28] To meet the City of Oakland Stormdrain Design Guidelines dated July 2006 and the Bay Conservation Development Commission (BCDC) estimated year 2050 sea level rise.

Table 2-5: Proposed Cut and Fill

Stage	Site	Cut (cy)	Fill (cy)	Dynamic Compaction Fill (1ft)(cy)	Subsidence Fill (cy)	Total Fill (cy)[a]	
1	A PL	52,759	48,841	65,106	37,761	98,949	Import
1	A PU	119	13,676	0	4,448	18,005	Import
1	A PC	73,759	527	23,087	13,390	-36,755	Export
1	A PR	94,119	0	26,310	15,260	-52,549	Export
1	B CU	0	7,243	0	2,343	9,586	Import
1	C PU	0	14,087	0	6,824	20,911	Import
1	B PC	5,861	4,299	9,066	12,058	19,562	Import
1	B PR	16,116	9,157	17,385	23,122	33,548	Import
1	C CU	0	15,227	0	9,606	24,833	Import
1	C PC	1,008	6,739	7,580	14,554	27,865	Import
1	C PR	791	7,885	10,124	19,437	36,655	Import
Stage 1 Totals		**244,532**	**127,681**	**158,658**	**158,803**	**200,610**	**Import**
2	D CL	77,004	53,003	42,478	70,938	89,415	Import
2	D PR	1,164	36,470	16,921	28,259	80,486	Import
2	B CL	12	21,204	8,682	11,547	41,421	Import
2	B PL	7,657	76,265	51,978	69,131	189,717	Import
2	C CL	0	70,288	38,115	73,181	181,584	Import
2	C PL	0	22,797	17,764	34,107	74,668	Import
Stage 2 Totals		**85,837**	**280,027**	**175,938**	**287,163**	**657,291**	**Import**
3	E	8,891	397,679	106,951	401,066	896,805	Import
3	F	876	88,334	31,513	118,175	237,146	Import
Stage 3 Totals		**9,767**	**486,013**	**138,464**	**519,241**	**1,133,951**	**Import**
TOTALS						**1,991,852**	**Import**

[a] Fill plus dynamic compaction fill plus subsidence fill minus cut equals total fill.

Source: Ruggeri-Jensen-Azar, 2011. CEQA Supporting Documentation for Project Description, Oakland Army Base. December 15.

Due to the nature of existing soils on the site, the proposed project would import approximately 2,500,000 cubic yards (cy) of material during construction and dispose of approximately 500,000 cy at the end of the project; a total 2,000,000 cy of fill material that would stay on site permanently. The "additional" 500,000 cy of material would be used during construction to weight down the site temporarily (surcharging) to force settlement of existing underlying soils (native Bay mud). All import material would be transported to the site primarily by barge (see Figure 2-11). However, it is estimated that about 10 percent of the import material would be transported to the site by truck, some of which would be done upon execution of the LDDA and appropriate permits.[29]

Import material has been priced (material and transportation) by the Developer from Decker Island in Solano County. However, it may be barged in from another source located at a comparable distance. Barges would be utilized to deliver material dockside at Location E in the Central Gateway area of the project. Barges would carry roughly 4,000 tons each or 2,666 cy. Offloading and redistributing import onsite would average approximately 8,000 cy/day, which would require three barges per day

[29] This early delivery of import (about 5 percent of the total project import amount) is anticipated because there are nearby sites that have available (export) material that can be brought to the project site at considerable cost savings between June 2012 and June 2013. The other 5 percent of truck import material is anticipated during construction. Approximately 90 percent of import fill material would be coming to the site by barge.

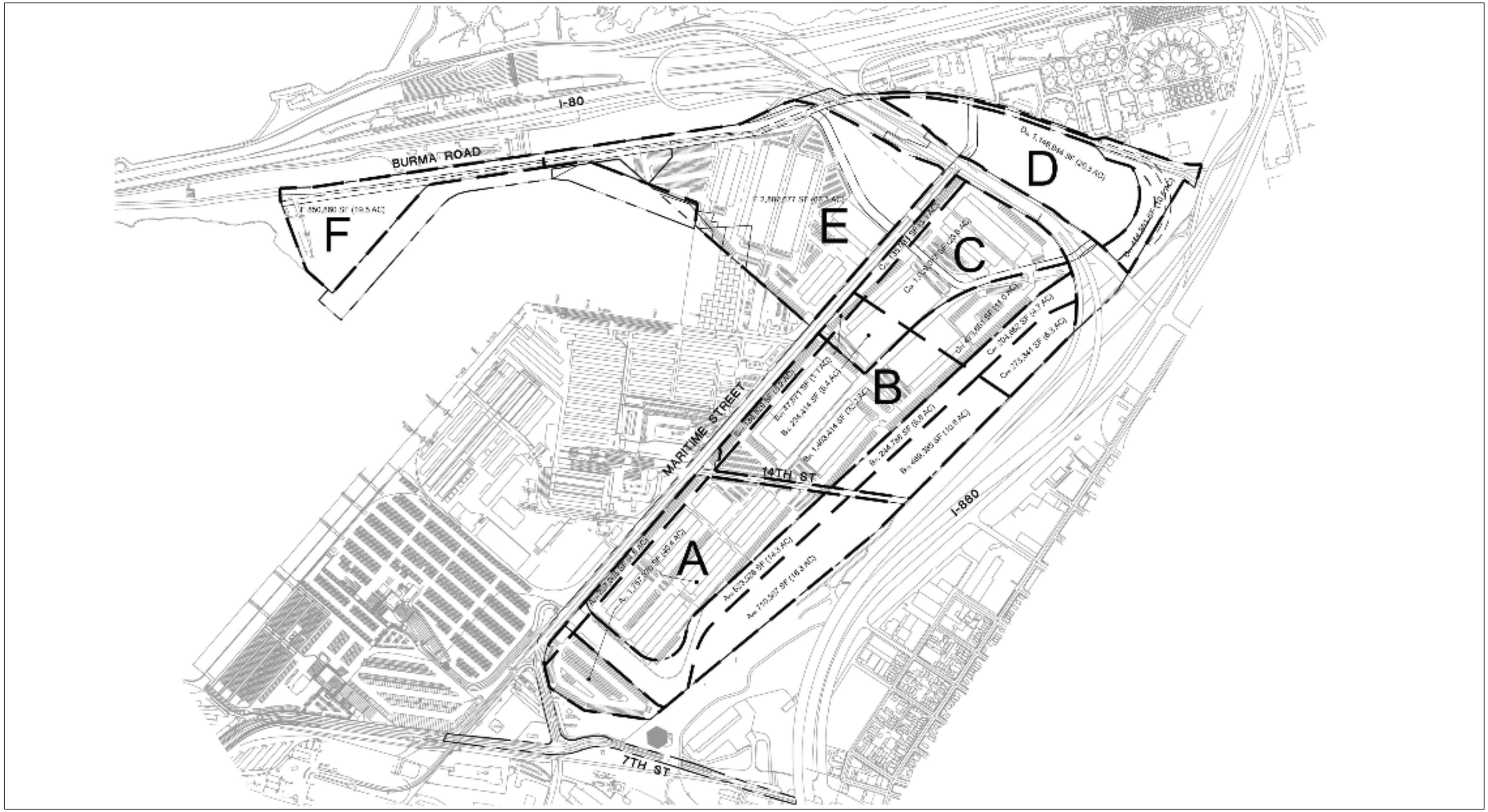

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FIGURE 2-11

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2012 Oakland Army Base Project
Grading Plan

SOURCE: RUGGERI-JENSEN-AZAR, 2011.

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to be delivered to the dock at Location E. Delivery of this material is planned to be a 24-hour operation requiring one barge to be delivered and unloaded every 8 hour shift for about 15 months. In order to keep this schedule there would be a daily need for the following marine equipment: six tug boats, six barges, and one unloading crane.

Work shift crews would take the 8,000 cy of the delivered stockpile, load it on a 5-foot wide conveyor belt for transportation from the dock location to the east side of Maritime Street. Material would be deposited in a stockpile then picked up by six scrapers. These scrapers would take the import from the deposited conveyor stockpile and deliver it to the appropriate fill site. The fill site would have a compactor receiving and placing import in accordance with the contract specifications.

Surcharging. As noted above, the process of weighting down the site is called surcharging. This process requires that dirt is temporarily stacked up higher (by about 8 feet) than the final grade elevation and it requires that this stacked pile stay in place for 6 months to one year, depending on the make-up of the underlying Bay mud. This surcharging process causes the underlying earth to compact, thus taking out a majority of its future settlement and resulting in stable soils to support buildings and site improvements. Current plan calls for five excavators to operate within each fill site to distribute import material throughout the fill site. As the fill material is brought, it is compacted in place. After surcharging duration is complete the same excavators would remove excess material from the site (that was used simply as a weight) and transport the material to an adjoining site for its surcharging process.

Wicking. To accelerate the surcharging process, and to mitigate potential liquefaction of sandy soils during an earthquake, it is proposed that a system of underground wick drain pipes (small diameter perforated pipes) be drilled vertically downward between 35 and 75 feet deep, on a 4-foot by 4-foot triangular spacing pattern, and connected at their tops by a horizontal system of pipes to collect ground water that would be forced upward by the surcharging weight. Without this "wicking process," settlement, by surcharging alone, would not occur for years. The water collected by the pipes (wicks) would be treated and disposed of following already established protocols defined by the RAP/RMP. Wick pipes are installed (before surcharging soils are placed) using a track mounted excavator with an auger attachment.

Construction Schedule. For both the Port and City lands it is anticipated that the development program and infrastructure improvements would begin construction no later than 2013 and proceed incrementally towards completion in 2020. As shown in Figures 2-12a through 2-12d, Material Handling Plan, it is proposed that the dynamic compaction, subsidence and rough grading would begin at the south end of the site (Area A) and move north as areas are completed, subject to the terms of each site development agreement.

7th Street Closure During Construction. Proposed Project includes improvements to the 7th Street underpass to increase the height of clearance (by lowering 7th Street itself in the east/west direction) and widening the road to achieve standard lane widths and a bike lane. Reconstruction of the roadway requires deepening the road, widening it and replacement of the bridge structure itself. As the roadway is below grade, new improvements require shoring of earth and temporary relocation of rail tracks above and permanent relocation of utilities adjacent to 7th Street.

Reconstruction of these improvements must be completed in phases to keep rail lines operational in the north/south direction. This phased reconstruction of under-rail improvements is planned in multi-

ple east/west sections (both directions) so that parts of the north/south rail tracks can stay in operation at all times. As such, the 7th Street underpass is proposed to be closed to traffic during project construction. Traffic would be diverted in two directions – West Grand Avenue to the north and Adeline Street to the south. As discussed in Section 3.15, Transportation and Traffic, a Construction Management Plan would be required, which would identify specific conditions and improvements that may be required to accommodate changes to local traffic during project construction, as well as coordination and consultation with other public agencies.

Table 2-6: Estimated Start and Completion Dates for Selected Construction Activities[a]

Area	Activity	Est. Start	Est. Completion
Preconstruction Activities	Soils Import	July 2012	June 2013
	Remediation	On-Going	August 2013
Roadways	Maritime Street	June 2013	October 2015
	Burma Road	June 2016	December 2018
	7th Street	February 2014	January 2016
Rail Terminal	Site Preparation	June 2013	February 2015
	Construction	March 2015	February 2017
	Operation	March 2017	--
Area A	Site Preparation	June 2013	November 2016
	Vertical Construction	August 2015	October 2016
	Occupation	February 2016	--
Area B	Site Preparation	June 2013	August 2017
	Vertical Construction	July 2016	August 2017
	Occupation	March 2017	--
Area C	Site Preparation	July 2013	July 2017
	Vertical Construction	June 2016	July 2017
	Occupation	January 2017	--
Area D	Site Preparation	May 2014	May 2018
	Vertical Construction	September 2016	July 2018
	Occupation	April 2018	--
Area E	Site Preparation	September 2014	December 2019
	Vertical Construction	November 2017	December 2019
	Occupation	May 2018	--
Area F - Working Waterfront Variant	Site Preparation	January 2015	July 2018
	Vertical Construction [b]	July 2012	February 2013
	Occupation [b]	March 2013	--
Area F - R&D Variant	Site Preparation	January 2015	July 2018
	Vertical Construction	December 2017	July 2018
	Occupation	July 2018	--

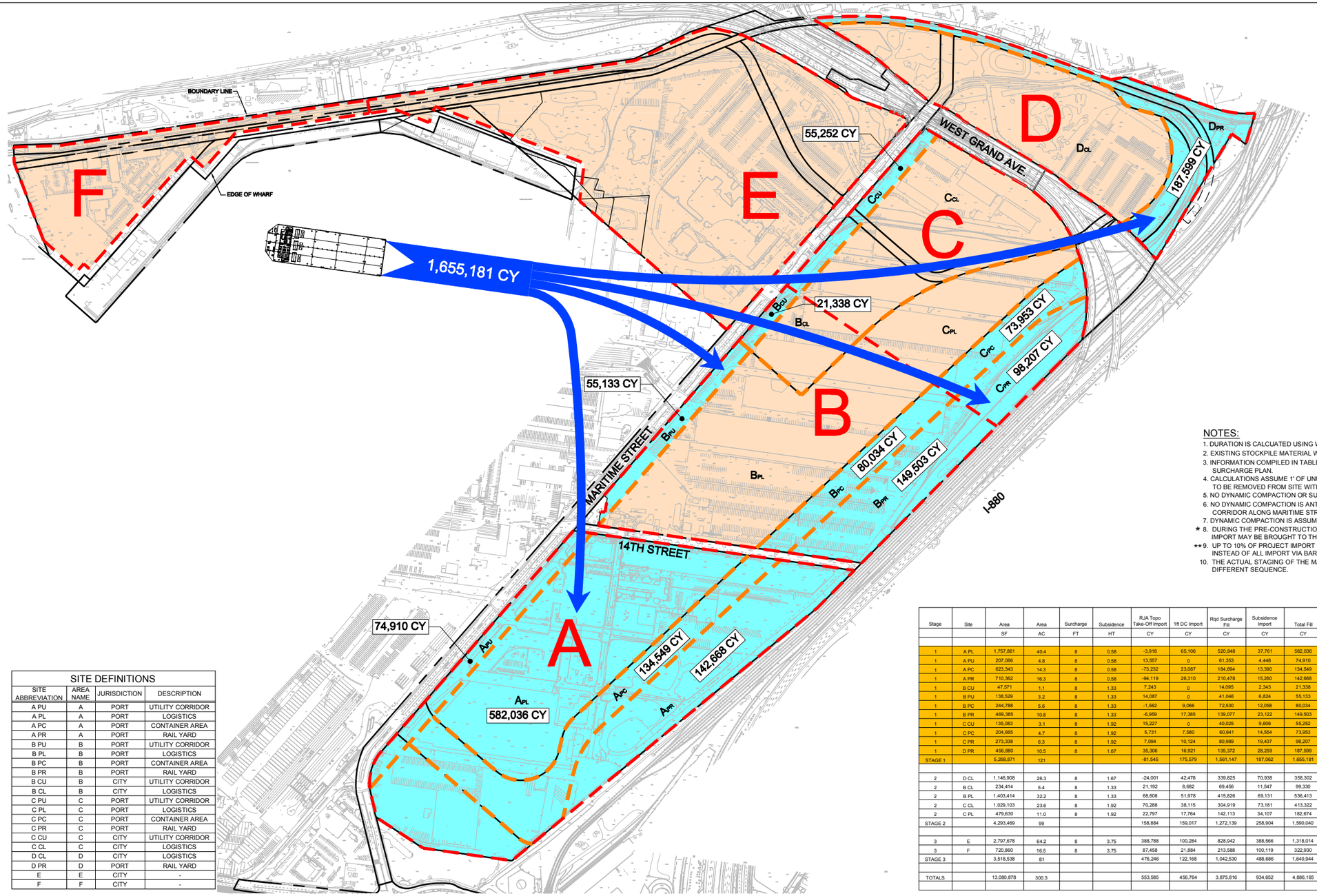
[a] Subject to terms of future sale, lease, development, and funding agreements.

[b] Subject to coordination with Caltrans and the contractor to be selected for the demolition of the eastern span of the Bay Bridge.

Notes:

– Vertical construction is all construction above rough grade, including fine grading, buildings, and related improvements.
– The staging of activities by area may follow a different sequence.

Source: CCIG. 2012.



LEGEND

- SURCHARGE COMPLETE
- UNDER SURCHARGE
- UNDISTURBED AREA
- IMPORT (XXX,XXX CY)
- ON-SITE EARTHWORK
- EXPORT (XXX,XXX CY)

NOTES:

1. DURATION IS CALCUATED USING WICK DRAINS AT 4 FEET SPACING.
2. EXISTING STOCKPILE MATERIAL WAS INCLUDED IN CALCULATIONS.
3. INFORMATION COMPILED IN TABLE BASED ON PRELIMINARY GRADING PLAN AND PRELIMINARY SURCHARGE PLAN.
4. CALCULATIONS ASSUME 1' OF UNUSABLE MATERIAL (FOUNDATIONS, ETC.) IN AREA OF BUILDINGS TO BE REMOVED FROM SITE WITH BUILDING DEMOLITION (1' STRIPPING OVER ENTIRE SITE).
5. NO DYNAMIC COMPACTION OR SURCHARGING IS ANTICIPATED UNDER GRAND AVENUE.
6. NO DYNAMIC COMPACTION IS ANTICIPATED WITHIN THE LIMITS OF THE PROPOSED UTILITY CORRIDOR ALONG MARITIME STREET.
7. DYNAMIC COMPACTION IS ASSUMED TO RESULT IN A 1.0' SETTLEMENT.
8. * DURING THE PRE-CONSTRUCTION PERIOD (6/2012-6/2013) UP TO 250,000 CY OF IMPORT MAY BE BROUGHT TO THE SITE VIA TRUCKS, THUS REDUCING THIS VOLUME.
9. ** UP TO 10% OF PROJECT IMPORT MAY BE BROUGHT TO THE SITE VIA TRUCKS INSTEAD OF ALL IMPORT VIA BARGE AFTER 6/2013.
10. THE ACTUAL STAGING OF THE MATERIALS HANDLING PLAN MAY FOLLOW A DIFFERENT SEQUENCE.

SITE DEFINITIONS

SITE ABBREVIATION	AREA NAME	JURISDICTION	DESCRIPTION
A PU	A	PORT	UTILITY CORRIDOR
A PL	A	PORT	LOGISTICS
A PC	A	PORT	CONTAINER AREA
A PR	A	PORT	RAIL YARD
B PU	B	PORT	UTILITY CORRIDOR
B PL	B	PORT	LOGISTICS
B PC	B	PORT	CONTAINER AREA
B PR	B	PORT	RAIL YARD
B CU	B	CITY	UTILITY CORRIDOR
B CL	B	CITY	LOGISTICS
C PU	C	PORT	UTILITY CORRIDOR
C PL	C	PORT	LOGISTICS
C PC	C	PORT	CONTAINER AREA
C PR	C	PORT	RAIL YARD
C CU	C	CITY	UTILITY CORRIDOR
C CL	C	CITY	LOGISTICS
D CL	D	CITY	LOGISTICS
D PR	D	PORT	RAIL YARD
E	E	CITY	-
F	F	CITY	-

Stage	Site	Area	Area	Surcharge	Subsidence	RJA Topo Take-Off Import	1ft DC Import	Rqd Surcharge Fill	Subsidence Import	Total Fill	Surcharge Excess	Excess Transferred to Site	Import from Barge	Export via Truck	Duration
		SF	AC	FT	HT	CY	CY	CY	CY	CY	CY	CY	CY	CY	MO
1	A PL	1,757,861	40.4	8	0.58	-3,918	65,106	520,848	37,761	582,036	483,086		582,036 *		8
1	A PU	207,066	4.8	8	0.58	13,557	0	61,353	4,448	74,910	56,905		74,910		8
1	A PC	623,343	14.3	8	0.58	-73,232	23,087	184,694	13,390	134,549	171,304		134,549		8
1	A PR	710,362	16.3	8	0.58	-94,119	26,310	210,478	15,260	142,668	195,218		142,668		8
1	B CU	47,571	1.1	8	1.33	7,243	0	14,095	2,343	21,338	11,752		21,338		12
1	B PU	138,529	3.2	8	1.33	14,087	0	41,046	6,824	55,133	34,222		55,133		12
1	B PC	244,788	5.6	8	1.33	-1,562	9,066	72,530	12,058	80,034	60,472		80,034		12
1	B PR	469,385	10.8	8	1.33	-6,959	17,385	139,077	23,122	149,503	115,955		149,503		12
1	C CU	135,063	3.1	8	1.92	15,227	0	40,025	9,606	55,252	30,419		55,252		12
1	C PC	204,665	4.7	8	1.92	5,731	7,580	60,641	14,554	73,953	46,088		73,953		12
1	C PR	273,338	6.3	8	1.92	7,094	10,124	80,989	19,437	98,207	61,552		98,207		12
1	D PR	456,880	10.5	8	1.67	35,306	16,921	135,372	28,259	187,599	107,113		187,599		12
STAGE 1		5,268,871	121			-81,545	175,579	1,561,147	187,062	1,655,181	1,374,085	1,374,085	1,655,181	0	
2	D CL	1,146,908	26.3	8	1.67	-24,001	42,478	339,825	70,938	358,302	268,886		215,956		12
2	B CL	234,414	5.4	8	1.33	21,192	8,682	69,456	11,547	99,330	57,909		0		12
2	B PL	1,403,414	32.2	8	1.33	68,608	51,978	415,826	69,131	536,413	346,695		0		12
2	C CL	1,029,103	23.6	8	1.92	70,288	38,115	304,919	73,181	413,322	231,739		0		12
2	C PL	479,630	11.0	8	1.92	22,797	17,764	142,113	34,107	182,674	108,006		0		12
STAGE 2		4,293,469	99			158,884	159,017	1,272,139	258,904	1,590,040	1,013,235	1,013,235	215,956	0	
3	E	2,797,678	64.2	8	3.75	388,788	100,284	828,942	388,566	1,318,014	440,375		304,779		12
3	F	720,860	16.5	8	3.75	87,458	21,884	213,588	100,119	322,930	113,469		322,930		12
STAGE 3		3,518,538	81			476,246	122,168	1,042,530	488,686	1,640,944	553,844	0	627,709	553,844	
TOTALS		13,080,878	300.3			553,585	456,764	3,875,816	934,652	4,886,165	2,941,163	2,387,319	2,498,845 **	553,844	

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FIGURE 2-12a

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SOURCE: ARCHITECTURAL DIMENSIONS, JANUARY 2012.

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2012 Oakland Army Base Project

Earthwork Sequencing Plan -
Import/Surcharge/Export Plan - Stage 1

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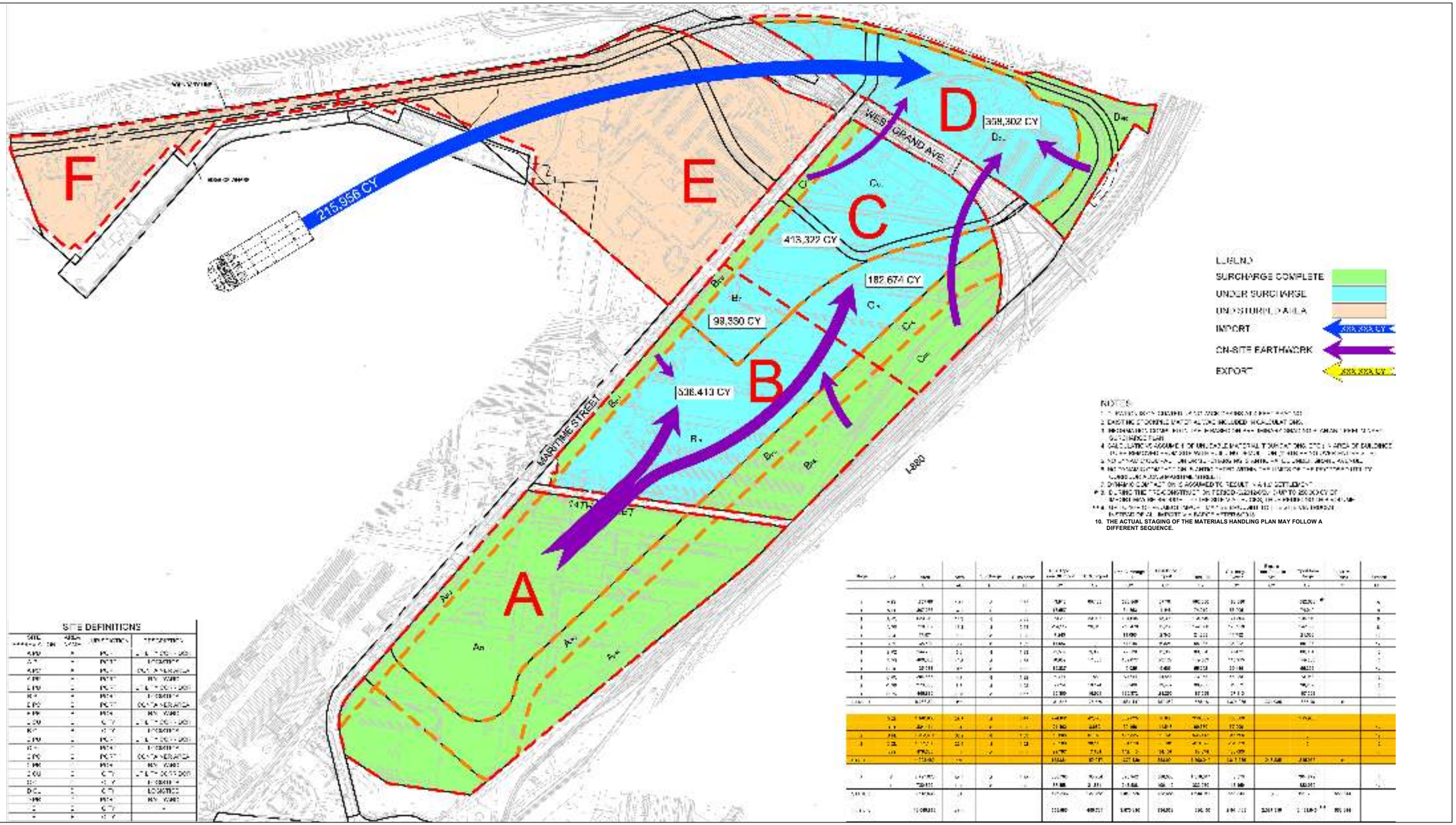

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FIGURE 2-12b

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2012 Oakland Army Base Project
Earthwork Sequencing Plan -
Import/Surcharge/Export Plan - Stage 2

SOURCE: BKF ENGINEERS, JANUARY 2012.

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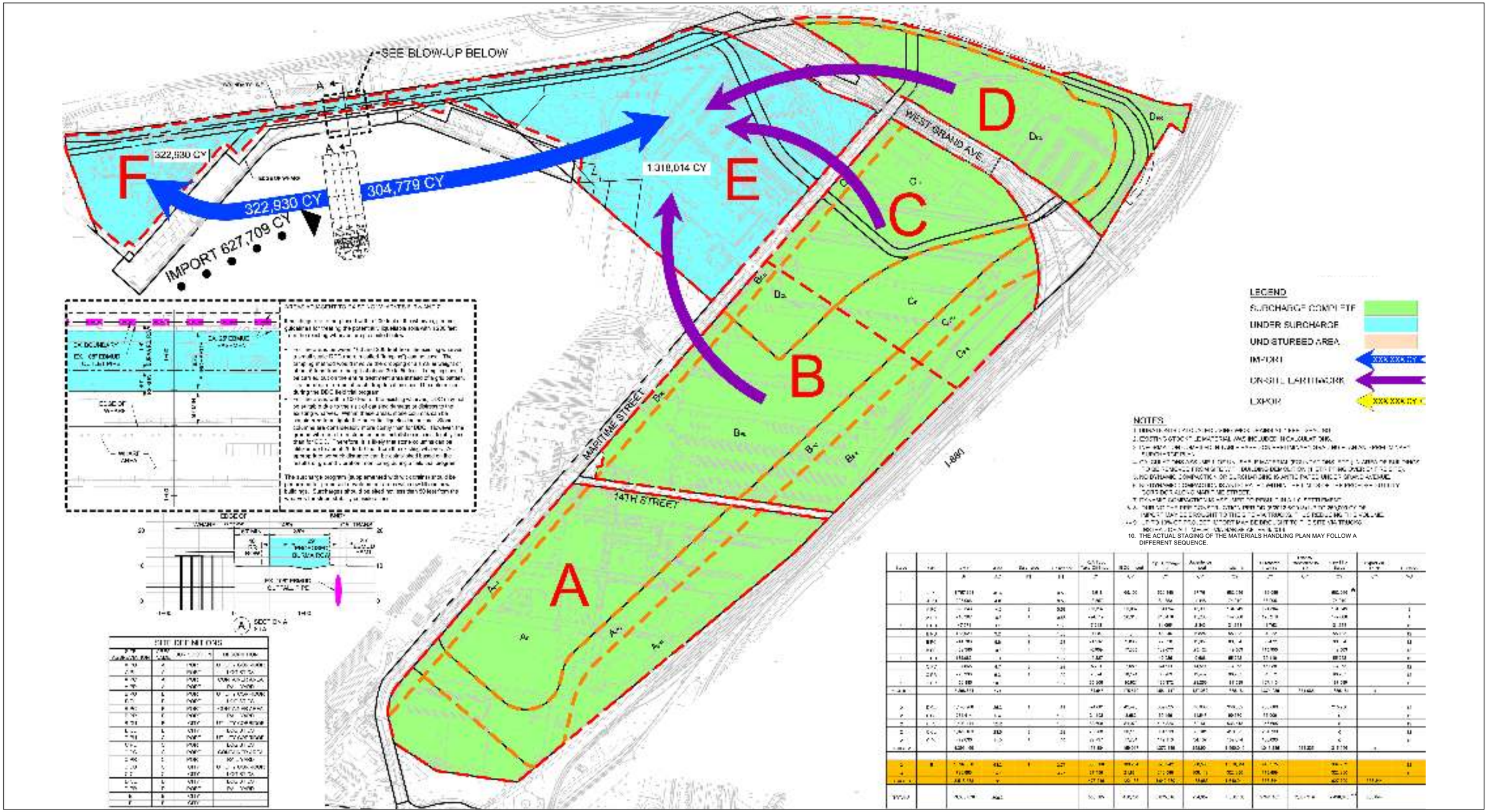

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FIGURE 2-12c

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2012 Oakland Army Base Project
Earthwork Sequencing Plan –
Import/Surcharge/Export Plan – Stage 3

SOURCE: BKF ENGINEERS, JANUARY 2012.

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FIGURE 2-12d

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SOURCE: BKF ENGINEERS, JANUARY 2012.

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2012 Oakland Army Base Project

Earthwork Sequencing Plan -
Import/Surcharge/Export Plan - Stage 4

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*Utility Relocation or Protection***.** Throughout the project site there is a myriad of underground and overhead utilities, main services and branch lines that serve individual buildings. Some of the services are inactive, or would no longer be used following building demolition. These "dead" services, while inactive, remain buried in the ground and would require, in most cases, removal during grading and trenching operations for new improvements on the project.

As part of the proposed project there would be two components of utility relocation: (1) to move utilities out of the way of new construction, and (2) to move or replace utilities permanently. The first effort is to move utilities out of the way of new construction. Examples of this are movement of existing overhead utilities from 14th Street where there would be new construction of a rail yard under the overhead utilities and relocation of utilities immediately adjacent to the 7th Street reconstruction site. In most cases, the first effort would drive to relocate utilities to their future, permanent locations but there would be instances where utilities would have to be relocated "temporarily" then relocated again permanently. An example is moving a water line feed to an existing building to make way for a new, crossing utility before the permanent water line is installed, after which a new feed to the existing building can be installed. The types of utilities that may be affected include water, sewer, storm drains, fuel, telecommunications, security, gas, and electrical.

Wherever possible, new utilities would be installed before demolishing old ones. The project anticipates installation of new utilities that would be activated before removal of old ones, allowing continuous operation of existing facilities without interruption of services.

2.3.4 PERMITS AND APPROVALS

The City, Port and/or Developer may be required to obtain permits or approvals or engage in consultation with other public, quasi-public and jurisdictional agencies. Table 2-7 identifies agencies along with potential discretionary regulatory requirements, permits, approvals or consultations. This list may be modified from time to time and the absence of an activity or an agency from the list does not preclude use of this environmental document for purposes of providing CEQA clearance for such permits, approvals or for engaging in consultation.

Table 2-7: List of Agencies Involved and Approvals, Consultations and Permits That May Be Required to Implement the Activities Contemplated in the Project Description

Agency	Permits, Approvals, Consultation Regulatory Trigger
Local	
City of Oakland	• Development Agreement (DA) • Planned Unit Development (PUD) • Subdivision Map • Conditional Use Permit (CUP) • Demolition Permits • Encroachment Permits • Excavation Permits • Grading Permits • P-Job Permit • Other Various Building-Related Permits • Possible clarifying General Plan amendment and rezoning • Lease Disposition and Development and Franchise Agreement (LDDA) • Possible City and Port land exchanges

Table 2-7 *Continued*

Agency	Permits, Approvals, Consultation Regulatory Trigger
Local *Continued*	
Port of Oakland	• Development Permit for any improvements in the Port Area, as defined in the City Charter • Possible City and Port land exchanges
Alameda-Contra Costa Transit District (AC Transit)	Funding and oversight
Alameda County Transportation Commission (ACTC)	Funding and oversight
Federal	
U.S. Army Corps of Engineers (ACOE)	• Section 404 Permit (Clean Water Act) for grading and excavation in certain areas of the site • Section 404 (Clean Water Act) and Section 10 of the Rivers and Harbors Act of 1899 for berth maintenance dredging at proposed bulk terminal • Wetland delineation and possible permits
Federal Railroad Administration	Inspection
Federal Aviation Administration	Notice of Proposed Construction or Alterations (required for cranes or structures that my affect navigable airspace)
Federal Transportation Agency (FTA)	Funding and oversight
Environmental Protection Agency (EPA)	Oversight
National Maritime Fisheries Service (NMFS)	Consultation for ACOE permits
Federal Highway Administration (FHWA)	Funding and oversight
United States Department of Transportation (U.S. DOT)	Funding and oversight
United States Fish and Wildlife Service (FWS)	Consultation for ACOE permits
Western Area Power Administration (WAPA)	Consultation and agreements
State and Regional	
California Department of Fish and Game (CDFG)	• Review under CEQA pertaining to potential effects to state protected species • Consultation on possible state regulatory permits
SF Bay Conservation and Development Commission (BCDC)	• Permit for any activity within BCDC jurisdictional area (normally 100 feet inland from mean high water level or edge of wharf), including dredging • Review of Seaport Plan and potential amendments • Review BCDC Bay Plan and proposed improvements
State Department of Transportation (Caltrans)	• Review under CEQA pertaining to potential effects to State transportation facilities and obtaining grant funds for infrastructure • Possible encroachment permits and/or easements • Billboard permits • Review and approval of under freeway construction plans and possible maintenance agreement
California Public Utilities Commission	Rail at-grade crossings
Regional Water Quality Control Board – San Francisco (RWQCB)	• Stormwater Pollution Prevention Plan (SWPPP) • Municipal Separate Stormwater Program Phase II (MS4) (administered by the RWQCB and EPA) • National Pollution Discharge Elimination System Permit (Waste Discharge Requirements – WDR's) • Discharge of treated ground water (if required) • Effects to surface water quality from discharge of site run-off • General Permit for construction on site of 5 acres or more • Authorizations for discharges of fill and dredged material under Clean Water Act Section 401 and the Porter-Cologne Water Quality Control Act • Wetland delineation and possible permits

Table 2-7 *Continued*

Agency	Permits, Approvals, Consultation Regulatory Trigger
State and Regional *Continued*	
State Lands Commission (SLC)	• Compliance with 2006 Tidelands Trust Exchange Agreement restrictions • Possible approval of City-Port Tidelands Trust land exchange
California Department of Toxic Substances Control (DTSC)	• Comply and/or modify Remedial Action Plan (RAP) and accompanying Risk Management Plan (RMP), Consent Agreement, FOSET, oversee post-compliance remediation program
East Bay Regional Park District (EBRPD)	• Transfer of West Gateway waterfront access land from City • Consultation on proposed lands for park and conceptual design concepts
Bay Area Air Quality Management District (BAAQMD)	• Demolition permits, stationary source permits
East Bay Municipal Utilities District (EBMUD)	• Confirmation of 2002 Water Supply Assessment per CEQA Guidelines • Consultation/coordination regarding water infrastructure planning • Consultation/coordination and possible Agreement for relocating Wake Avenue and Engineers Road
Pacific Gas and Electric (PGE)	• Consultation regarding connections to main lines, electric service • Consultation regarding solar installation
American Telegraph and Telephone (AT&T)	Agreements, design and approval
California Transportation Commission (CTC)	Oversight and funding
California Air Resources Board (ARB)	Consultation
Metropolitan Transportation Commission (MTC)	Oversight and funding
Bay Area Rapid Transit (BART)	• Permit to enter • Construction Permit
Bay Area Toll Authority (BATA)	Consultation and oversight
Other	
City and County of San Francisco	Possible consultation regarding impacts to power lines (from Davis Substation to Treasure Island)
Union Pacific, BNSF & OTR (private)	Consultations/coordination and possible agreements for relocating and connections to rail lines and new crossings
Chubb Insurance	Consultation and funding

Source: LSA Associates, Inc., 2012.

The Port of Oakland currently holds permits that provide authorization on Port-owned property for specified shoreline maintenance activities and for berth maintenance dredging in the vicinity of the project area:

Shoreline Maintenance

1. US Army Corps of Engineers, Permit No. 27531s, 2003-2013
2. SF Bay Conservation and Development Commission, Permit No. M1989.075.09, last amendment dated 9/16/2011
3. Regional Water Quality Control Board, 10 year Conditional Water Quality Certification for Port Maritime Maintenance Activities, dated Oct. 2, 2003

Berth Maintenance Dredging

1. US Army Corps of Engineers, Permit No. 27629S, through 2013
2. SF Bay Conservation and Development Commission, Permit No. M92-41, through 2018
3. Regional Water Quality Control Board, Water Quality Certification, Maintenance Dredging at the Port of Oakland from 2008 through 2013

2.3.5 IMPLEMENTATION TO DATE OF THE OARB REDEVELOPMENT PLAN

Since July 2002, when the *Final Environmental Impact Report of the Oakland Army Base Area Redevelopment Plan* was certified and a Final Reuse Plan was adopted, the City of Oakland and the Port have taken a number of actions to carry out the Redevelopment Plan, including without limitation the following:

- In July 2003, the U.S. Army completed transfer of their former land ownerships within the former OARB to the Oakland Base Reuse Authority (OBRA), the local reuse authority charged with planning and implementing the conversion of the closed military bases in Oakland, California.
- The City, the City of Oakland Redevelopment Agency, OBRA and the Port entered into the Army Base Memorandum of Agreement (ARMOA) to convey certain parcels of Army Base property and adjacent Port-owned property to each other.[30]
- The City of Oakland and State Lands Commission negotiated and settled issues related to the designation of lands subject to Tidelands Trust through the recordation of the Oakland Army Base Title Settlement and Exchange Agreement dated August 7, 2006.
- The City and Port worked with BCDC to amend the Bay Plan and Seaport Plan, as necessary, to implement development envisioned by the OARB Reuse Plan and Redevelopment Plans.
- Hazardous materials clean-up operations have been conducted in several portions of the OARB, pursuant to the approved OARB Remedial Action Plan/Risk Management Plan (RAP/RMP). The Army Base Remediation Action Plan/Risk Management Program (RAP/RMP) consists of 167 site-specific locations (7 RAP and 160 RMP) on City- and Port-owned portions of the Army Base. As of February 2012, a majority of these sites (144 of 167) have been closed or are near closure.[31] In addition, there are 5 "categorical" RMPs which are site-wide areas of concern such as storm drains and sanitary sewers that are expected to be addressed during development.
- Although neither of these projects were ultimately pursued for a variety of reasons, the City of Oakland amended the Reuse Plan and completed three other environmental documents related to potential redevelopment of portions of the OARB including a 2006 Supplemental EIR and 2007 Addendum for a proposed Auto Mall, and a 2009 Addendum for a proposed aggregate recycling and fill project, both on portions of the Gateway Development Area.
- The Port completed a 2006 Addendum that looked at the impacts of not relocating Maritime Street to the east onto OARB property.
- Three buildings have been demolished in the City-owned portion of the Army Base. Building 1 was demolished by the Army before the property was transferred to OBRA/City of Oakland Redevelopment Agency/City.[32]
- Thirty buildings were demolished in the Port portion of the Army Base in 2006-2007, with another building demolition planned for late Spring 2012.

[30] As of February 1, 2012, the City of Oakland has acquired the Redevelopment Agency's interest in the former Oakland Army Base.

[31] The closed sites have been investigated and cleaned, and the Agency and/or Port has received documentation from the state of California Department of Toxic Substance Control ("DTSC") and/or the Regional Water Quality Control Board ("RWQCB") verifying the regulatory closure. The near closure sites have been investigated and cleaned if necessary, and are awaiting closure documentation from the DTSC and/or RWQCB.

[32] Buildings 4 and 5 were demolished after 2006 when the Agency became the property owner. Building 5 was demolished as part of a rail removal and building reuse project. Building 4 was demolished because it was a red-tagged building that posed a safety hazard.

- Property on the OARB was leased for interim maritime support activities, and approximately 30 acres of truck parking was provided.
- Container cargo throughput at the Port has increased from 1.7 million twenty-foot equivalent units (TEUs) to 2.3 million TEUs in 2011.
- In 2008, the Port was given an allocation of $242 million in Prop 1B Trade Corridor Improvement Funds (TCIF) to fund the Oakland Outer Harbor Inter-Modal Terminal (OHIT) and the 7th Street Grade Separation. The TCIF funds require matching funds from private or other public sources. Since the original award, the Port applied to the California Transportation Commission (CTC) to reallocate all the $242 million in TCIF funds into the OHIT and to amend the OHIT project scope to include the infrastructure improvements on the City's portion of the OARB, as well as the Port's OHIT rail yard. The Port anticipates that the CTC will consider the Port's application in late June, 2012.
- In 2008, the City of Oakland conducted a national solicitation for qualifications for master developers for the City-owned site. In 2009, the City of Oakland solicited proposals from the qualified respondents and selected the joint venture between Prologis and California Capital and Investment Group (Prologis/CCIG), including their identified Developer Team.
- In 2010, an Exclusive Negotiating Agreement (ENA) was executed with Prologis/CCIG as the master developer, which is heading the master planning effort currently underway, and the subject of this Initial Study/Addendum; subsequently, the City and the master developer entered into a Second Amendment to the ENA, whereby the City agreed to fund up to $14.1 million towards the necessary planning and engineering studies to create a master plan, which is the subject of this Initial Study/Addendum and to subsequently proceed to construction documents, with a goal of being under construction in June 2013.
- In July 2011, the City of Oakland Redevelopment Agency and the Port of Oakland executed a Cost Sharing Agreement for the development of infrastructure, the Port's OHIT rail yard, public utilities, and public streets in and around the Former OARB, committing the and City to up to $32,000,000 and the Port to invest the entire $242,000,000 of the TCIF allocation towards those purposes. In this Agreement, the City's Developer Team was authorized, with Port and City oversight, to produce a Master Plan and preliminary design for the entire site, including the Port-controlled OARB lands. These planning and engineering studies are the subject of this Initial Study/Addendum.
- In March 2012, the Port applied for a $20 million TIGER 2012 grant to go towards funding its Phase 1 rail yard.
- Subject to the findings of this Initial Study/Addendum, lease and purchase documents are being negotiated with the previously selected mater developer Prologis/CCIG, the two recycling operations California Waste Solutions (CWS) and Custom Alloy Scrap Sales (CASS), and the truck facilities developer Oakland Maritime Support Services (OMSS).
- Mitigation measures identified in the 2002 MMRP were undertaken, including those addressing cultural resources and air quality issues (see Section 3.3, Air Quality, and Section 3.5, Cultural Resources). Measures pertaining to construction impacts were incorporated in specifications for Port demolition contracts.

2.3.6 COMPARISON OF THE 2012 OARB AND 2002 OARB PROJECTS

As noted above, the 360.5-acre 2012 Project site is almost entirely located in the OARB sub-district of the 1800-acre Oakland Redevelopment Area. The primary difference between the 2012 Project and what was proposed for the same geographic location in the 2002 Project is a shift from office/R&D to a greater amount of warehouse/distribution and maritime-related logistics uses as the predominant use. The 2012 Project proposes up to approximately 2.5 million square feet of warehouse/distribution and maritime-related logistics uses and 175,000 square feet of office/R&D, as compared to 300,000 square feet of warehouse/distribution and approximately 1.5 million square feet of office/R&D in the 2002 Project.[33]

Additional components of the 2002 Project and the 2012 Project are summarized in Table 2-8 and listed below:[34]

- Approximately 20 to 24 acres north of Grand Avenue for 379,610 square feet of indoor recycling facilities are proposed to be located in the North Gateway, as compared to 494,000 square feet proposed for light industrial uses in the 2002 Project.
- Both the 2002 and 2012 Projects include the BCDC-required acreage for Ancillary Maritime Services (AMS) for the City and Port; however, in the 2012 Project, the 15-acres of BCDC-required AMS in the City-owned portion of the OARB is now being provided in a different location, split in three different locations in the Project Area; as part of the proposed truck parking facilities, there would be fueling services, some of which are anticipated to be biodiesel; the BCDC-required fifteen (15) acres of AMS for the Port are now being provided as part of the 2012 Project Area as truck parking.
- As an implementation of Mitigation Measure 4.6-2 in the 2002 EIR, a Commemorative Area is proposed within the Central Gateway, in the vicinity of the intersection of Maritime Street and Burma Road to memorialize the contributions of civilians and the military in the Bay Area to World War II, and Korean and Vietnam Wars.
- Demolition, site preparation, and remediation are generally the same in both the 2002 and 2012 Projects.
- Up to nine billboards are proposed to the north of West Burma Road, along Grand Avenue and along I-880 (Figure 2-6) as part of the 2012 Project; no billboards were contemplated as part of the 2002 Project.
- The Port-owned Joint Intermodal Terminal (JIT) would remain in operation as a rail yard.
- The railroad intermodal terminal in the OARB sub-district Port Development Area and associated right-of-way to support maritime uses that was proposed in the 2002 project will be constructed as part of the 2012 project, but will be smaller (approximately 61 acres);

[33] The *Final Reuse Plan for the Oakland Army Base* (as amended in July 2002) put forth a "Conceptual Reuse Strategy" and a preferred "Flexible Alternative" that identified a menu of intended land uses for future reuse of the former OARB or "Gateway Development Area" and stated that actual development with the Gateway Development Area could change over time to reflect the prevalent market conditions and demands, in order to achieve the broader goals and objectives of the *Reuse Plan* and *Redevelopment Plan.* Moreover, two of the alternatives studied in the 2002 *OARB Redevelopment Area Plan EIR* would result in more and greater impacts than the 2012 Project: the "High Intensity" alternative that proposed the upper range of potential development for land uses identified as the preferred scenario, and the "Full Maritime" alternative that proposed development of the OARB and Maritime sub-districts solely for Port use and Port-supportive industries and businesses, similar to the 2012 Project but at greater intensities.

[34] The areas proposed by the 2002 Project for Gateway Park and Berth 21 are not part of the 2012 Project.

- Berth/Wharf 7 will remain in operation as a bulk terminal under Variant A.
- In the 2012 Project, Maritime Street is proposed to be improved with intersection controls, bicycle and pedestrian paths, and repaving and landscaping with minor reconfiguration; the street would not be relocated 400-600 feet to the East as was proposed in the 2002 Project (see Port's 2006 Addendum that looked at the impacts of not relocating Maritime Street to the East onto OARB property); roadway improvements also include options to improve Burma Road, Engineers Road, relocate Wake Avenue, and rebuild and grade separate 7th Street west of I-880.
- Installation of new utility systems that meet current standards, such as water distribution (both domestic and reclaimed water), wastewater collection, stormwater collection/discharge, gas distribution, electrical systems, security, telecommunication and similar systems.[35]

[35] No new connections will be made to EBMUD's existing 15" sewer line. Please see Section 3.17, Utilities and Service Systems, for additional descriptions.

Table 2-8: Comparison of 2002 EIR and 2012 Project

OARB Sub-District	Land Use	2002 Project[1]		2012 Project			
				Variant A Working Waterfront		Variant B R&D/Open Space	
		Square Feet	Acres[2]	Square Feet	Acres	Square Feet	Acres
Gateway Development Area (GDA)	Light Industry	494,000		-	-	Same as Variant A	
	Recycling Facilities	-	-	379,605	25		
	Retail	25,000		-	-		
	Ancillary Maritime Services[3]	n/a	15	37,673	15		
	Office, R&D	1,528,000		-	-	175,000	11
	Warehouse/Distribution	300,000		1,089,223	94	942,763	82
	Five (5) Billboards	-	-	n/a	Included	Same as Variant A	
	Building Development Subtotal	**2,347,000**	**183**	**1,506,501**	**133**	**1,535,041**	**133**
	Roadways[4]	n/a	Included	864,450	20	Same as Variant A	
	Rail Right-of-Way	-	-	124,200	3		
	Utilities	n/a	Included	n/a	Included		
	Wharf Reuse/Repair[5]	n/a	Included	504,600	13.1	91,100	2.1
	Infrastructure Subtotal[6]	**-**	**-**	**124,200**	**23**	**124,200**	**23**
	Public Access or Park[7]	n/a	10	n/a	3	n/a	12
	GDA Subtotal[6]	**2,347,000**	**193**	**1,506,501**	**159**	**1,535,041**	**168**
Port Development Area	Warehouse/Distribution	-	-	882,88	97	Same as Variant A	
	Ancillary Maritime Services	n/a	2	n/a	Included		
	Four (4) Billboards	-	-	n/a	Included		
	Building Development Subtotal	**-**	**2**	**882,881**	**97**	**882,881**	**97**
	Port Rail Terminal[9]	n/a	130	2,664,400	61	Same as Variant A	
	Roadways[4]	n/a	Included	657,550	15		
	Utilities	n/a	Included	n/a	Included		
	Marine Terminals and Cargo Throughput[8]	n/a	55	Not included as part of this project			
	Infrastructure Subtotal[6]	**n/a**	**185**	**2,664,400**	**76**	**2,664,400**	**76**
	Port Development Area Subtotal[6]	n/a	**187**	**3,547,281**	**173**	**3,547,281**	**173**
TOTAL		**2,347,000**	**380**	**2,389,382**	**332**	**2,417,922**	**341**

Note: All property and building measurements are approximate.

[1] The approximately 360-acre 2012 Project is almost entirely on the Oakland Army Base portion of the Oakland Army Base Redevelopment Area. What is shown under the 2002 Project only includes the development that was proposed in the same geographic area of the 2012 Project.

[2] Acres refers to total land area occupied by this use, not proposed building square footage.

[3] Ancillary Maritime Services (AMS) uses may include a variety of port-related transportation supporting facilities, including and not limited to: truck parking; cargo storage and other maritime support services. The 2012 Project does not include a change in AMS uses but does include a change in location.

Table notes continued on next page.

[4] Includes the following changes: 1) Maritime Street will not be relocated and will be improved in same general location through the Gateway Development Area to the Gateway Peninsula; Burma Road (West Burma) will be relocated south of its current alignment in the Central Gateway, and connect to a new Access Roadway (East Burma) east of Maritime; 2) Under the highway there will be no change from what was studied in the 2002 EIR; 3) changes proposed to Grand Avenue at-grade were required mitigation as part of the 2002 EIR at Grand Avenue/Maritime Street; 4) two variants for 7th Street grade-separation are included.

[5] As noted in Footnote 17 (p.3-29 of the 2002 EIR), Wharf 7 and the majority of Wharf 6 ½ would remain and be reused.

[6] Wharf repair/reuse and roadways are not included in the calculations for any of the building or infrastructure subtotals or total development

[7] The 2002 EIR included 29 acres of park/public access which consisted of 10 acres of shoreline access and 19 acres for a Gateway Park to be developed by EBRPD. The 2012 Project area does not include the 19-acre Gateway Park. Gateway Park is in the early planning stages being led by EBRPD and a consortium of agencies.

[8] The new marine terminal in the OARB Sub-district and the Maritime Sub-district ("New Berth 21") studied in the 2002 EIR continue to be part of the Port's development plan. However, these improvements will not be constructed as part of the 2012 Project, but are considered a cumulative project. 4.05 TEUs of container cargo throughput was cleared through the 2002 OARB EIR.

[9] The Port's Joint Intermodal Terminal, which is not located on the OARB property, will be retained; the 2002 EIR considered demolishing that rail yard.

Source: City of Oakland, Port of Oakland, CCIG 2012.

REFERENCES

Architectural Dimensions, 2012. *CEQA Supporting Documentation for Project Description, Oakland Army Base*. March 14.

G. Borchard & Associates, 2002. *OARB Area Redevelopment EIR, Public Review Draft*. April 2002.

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Turner Construction Company, 2011. Project Safety Program.

3.0 ENVIRONMENTAL TOPICS

This chapter provides updated information, describing existing site conditions and the current, applicable policies and regulations, and an environmental assessment of the proposed 2012 Oakland Army Base Project. For each environmental topic, the chapter summarizes the 2002 EIR analysis and conclusions, describes existing site conditions relevant to that environmental topic, updates the regulations applicable to the environmental topic, and analyzes the effects of the 2012 Project against existing physical conditions.[36] In addition, this chapter compares the effects of the 2012 Project with those effects identified in the 2002 EIR. Also, previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted.[37] This chapter also identifies the current applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

The following environmental topics are discussed: Aesthetics; Agriculture and Forest Resources; Air Quality; Biological Resources; Cultural Resources; Geology and Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Mineral Resources; Noise; Population and Housing; Public Services; Recreation; Transportation/Traffic; Utilities and Service Systems.

[36] The 2002 EIR utilized an "Alternative Baseline" (pursuant to CEQA Guidelines section 15229 and Public Resources Code section 21083.8.1) assessing impacts against physical conditions existing at time of the military base closure (1995) rather than existing at the time of the commencement of CEQA review (2001) for the following environmental topics: traffic, water consumption, wastewater, energy consumption, noise, air quality, schools, and population/employment. This Addendum also utilizes the Alternative Baseline.

[37] The 2002 Summary Mitigation Measures are identified in this chapter. Please refer to Appendix I for 2002 Mitigation Measure details and Appendix J for changes to 2002 Mitigation Measures.

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3.1 AESTHETICS

This section evaluates the potential aesthetic impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant aesthetics impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant aesthetics impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.1.1 PRIOR ANALYSIS AND CONCLUSIONS

3.1.1.1 2002 EIR Impact Findings

The 2002 EIR concluded that the 2002 Project would have a residual significant and unavoidable impact related to scenic resources and visual character:

> **Impact 4.11-2:** Redevelopment of the project site would remove buildings contributing to a historic district, including visually striking warehouse structures visible from I-80, a locally designated scenic route, and a portion of the State scenic highway system.

The 2002 EIR concluded potentially significant impacts related to light and glare, shadows on solar collectors, and shadows on public park or open space could 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, resulting in a potentially significant impact.
>
> **Impact 4.11-4:** New construction could introduce building or landscaping elements that would now or in the future cast shadow on existing solar collectors, resulting in a potentially significant impact.
>
> **Impact 4.11-5:** New construction could introduce building or landscaping elements that would now or in the future cast shadow on that substantially impairs the beneficial use of a public park or open space, resulting in a potentially significant impact.

The 2002 EIR concluded that the 2002 Project would have less-than-significant impacts on scenic vitas:

> **Impact 4.11-1:** Short-term mid-ground views of moderately sensitive viewers of the Bay may be blocked by redevelopment of the project site, resulting in a less-than-significant impact.

3.1.1.2 2002 EIR Mitigation Measures

For the potentially significant impact related to light and glare, the 2002 EIR identified the following mitigation measures to reduce impacts 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 subsection 3.1.5, criterion d below)*

For the potentially significant impact related to shadows cast on solar collectors, the 2002 EIR identified the following mitigation measures to reduce impacts to a less-than-significant level:

Mitigation Measure 4.11-3: New active or passive solar systems within or adjacent to the project area shall be set back from the property line a minimum of 25 feet.

Mitigation Measure 4.11-4: New construction within the Gateway development area adjacent to a parcel containing permitted or existing active or passive solar systems shall demonstrate through design review that the proposed structures shall not substantially impair operation of existing solar systems.

Mitigation Measure 4.11-5: The City and Port shall coordinate with respect to the design of new, permanent buildings constructed along the Port/Gateway boundary to minimize conflicts over solar access.

For the potentially significant impact related to shadows cast on public parks and open space, the 2002 EIR identified the following mitigation measure to reduce impacts to a less-than-significant level:

Mitigation Measure 4.11-6: New construction adjacent to a public park or open space shall demonstrate through design review that development shall not substantially impair enjoyment of the public using the space.

3.1.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

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 and that 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.

3.1.3 UPDATED REGULATORY SETTING

Since adoption of the 2002 EIR, the City of Oakland General Plan has been updated. The redevelopment of the Army Base must comply with current regulations. The following discussion reviews provisions of the Oakland General Plan and other regulations that are relevant to aesthetics for the 2012 Project.

3.1.3.1 State

3.1.3.1.1 California State Scenic Highways Program

As identified in the 2002 EIR, Sections 260 through 283 of the California Street and Highways Code describe the California Scenic Highways Program. The program's intent is to protect and enhance California's natural beauty and to protect the social and economic values provided by the State's scenic resources. The Code states that standards for protection of official scenic highways shall require local agencies to take such actions as may be necessary to protect the scenic corridor, including but not limited to the following: regulate land use and development density; require detailed land and site planning; control outdoor advertising; and pay careful attention to and control earthmoving and landscaping as well as the design and appearance of structures and equipment.

The State Scenic Highway System includes Interstate 80/Interstate 580 (I-80/I-580) from Interstate-280 (I-280) in San Francisco to State Route 61 (SR-61) in Oakland, including the Bay Bridge immediately north of the redevelopment program area. Only the I-580 portion from the MacArthur maze to SR-61, however, is a State-designated Scenic Highway.

3.1.3.1.2 Senate Bill 5X Outdoor Lighting Standards

Senate Bill 5X became effective in October 1, 2005, and established authority for the State of California Energy Commission (CEC) to adopt lighting standards for outdoor lighting. The CEC has contracted a team of engineering firms in response to Senate Bill 5X to develop standards for energy conservation and lighting pollution mitigation requirements. Mandatory measures require that outdoor lighting be automatically controlled so that it is turned off during daytime hours and during times when it is not needed.

3.1.3.1.3 Outdoor Advertising Act

The Outdoor Advertising Act (OAA) regulates the placement of advertising displays adjacent to and within specified distances of highways that are part of the national system of interstate and defense highways and federal-aid highways. The OAA regulates the size, illumination, orientation, and location of advertising displays. Under the OAA, a Highway Outdoor Advertising Permit Application must be submitted to the California Department of Transportation (Caltrans) and a permit secured prior to the placement of all displays.

3.1.3.1.4 San Francisco Bay Plan

As identified in the 2002 EIR, the portion of the redevelopment program area within 100 feet of the Bay shoreline is subject to the policies of the Bay Conservation and Development Commission's (BCDC) San Francisco Bay Plan. The Bay Plan was prepared by BCDC over a three-year period pursuant to the McAteer-Petris Act of 1965, which established the BCDC as a temporary agency to prepare an enforceable plan to guide the future protection and use of San Francisco Bay and its shoreline. The Bay Plan has been amended periodically since its adoption and BCDC continues to systematically review the plan to keep it current. The Bay Plan addresses appearance, design, and scenic views of development around the Bay, among other issues.

3.1.3.2 Local

3.1.3.2.1 Port of Oakland Exterior Lighting Policy

The Port of Oakland's Exterior Lighting Policy includes requirements and mitigation measures to prevent potential lighting pollution that may be generated by development and operations, and to conserve energy in all areas under the jurisdiction of the Port of Oakland.

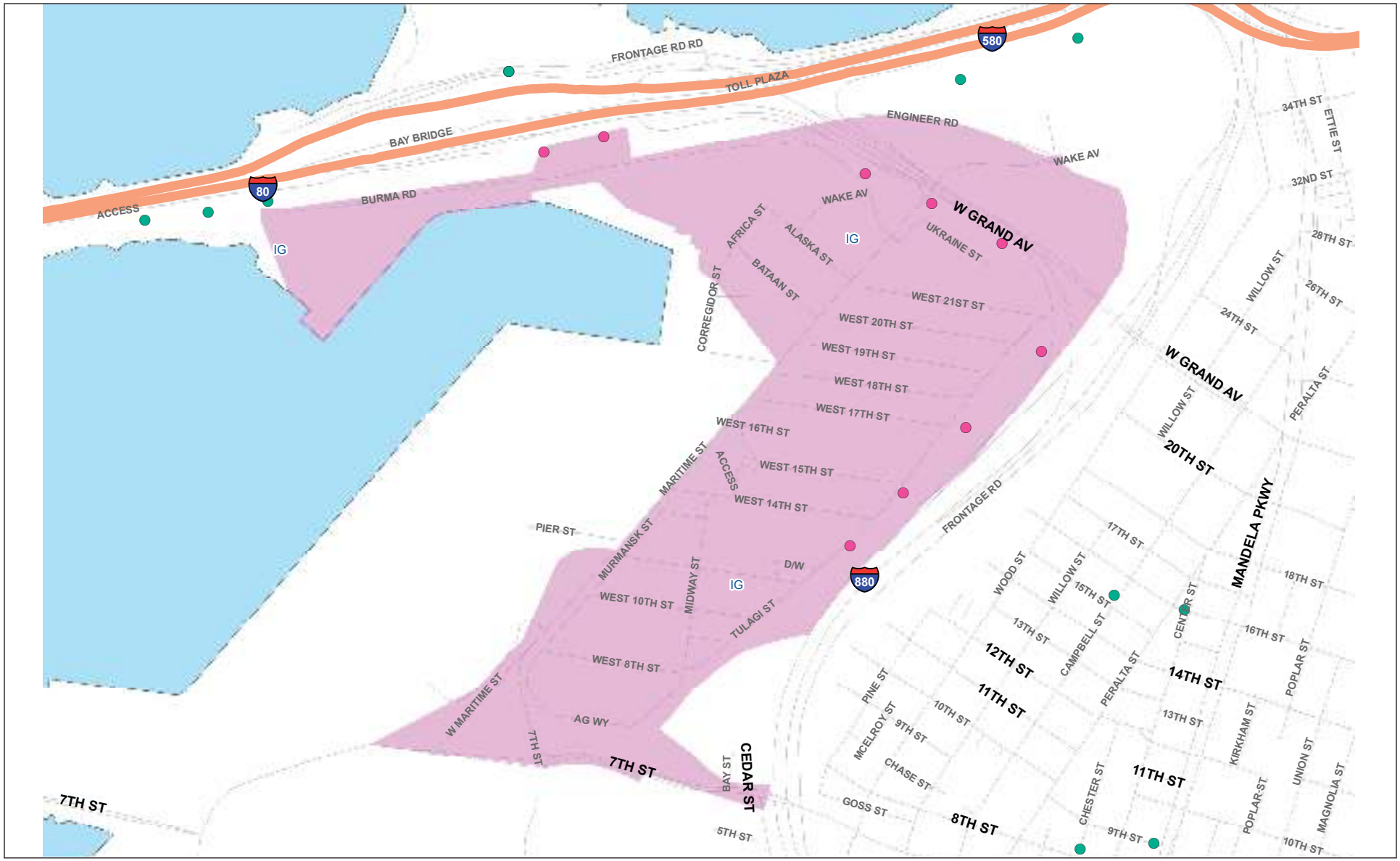
3.1.3.2.2 City of Oakland General Plan Policies and Actions

As identified in the 2002 EIR, the Scenic Highways Element of the Oakland Comprehensive Plan (the precursor of the General Plan) designated I-80/I-580 across the Bay Bridge and eastward for its entire length through Oakland as a scenic route (Oakland, 1974). This element also recognizes the visual setting from I-80/I-580 toward the redevelopment program area as industrial in nature, and does not identify the redevelopment program area as a "problem area" along the route. As shown in Figure 3.1-1, although the proposed billboards for the 2012 Project are not located within the boundaries of the MacArthur Freeway Scenic Corridor, they are nevertheless visible from such. Specific policies for the MacArthur Freeway (I-580) scenic route are identified below:

- Policy 1: The signs within the scenic corridor that are visible from the freeway should be for identification purposes only; no advertising should be permitted.
- Policy 2: Visual intrusions within the scenic corridor should be removed, converted, buffered or screened from the motorist's view.
- Policy 3: Panoramic vistas and interesting views now available to the motorist should not be obliterated by new structures.
- Policy 4: New construction within the scenic corridor should demonstrate architectural merit and a harmonious relationship with the surrounding landscape.

As identified in the 2002 EIR, the Open Space, Conservation, and Recreation (OSCAR) Element of the Oakland General Plan recognizes the Oakland shoreline as possessing diverse values, including its value as an aesthetic resource and as a gateway to other aesthetic resources, such as the Bay.[38] The OSCAR Element includes specific goals and objectives regarding increased visual access to and from the shoreline, and policies intended to achieve shoreline aesthetic/visual access goals and objectives:

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



LSA

FIGURE 3.1-1

Existing Billboards

Proposed Billboards

Scenic Highways*

2012 OARB Project Boundary

*Source:
City of Oakland General Plan, Scenic Highway Element, 1974.

N

0 1100 2200
FEET

SOURCE: CITY OF OAKLAND, DEPT. OF PLANNING, BUILDING & NEIGHBORHOOD PRESERVATION, APRIL 2012.

2012 Oakland Army Base Project

Scenic Highways and Billboards

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Objective OS-7: To increase physical and visual access to the Oakland shoreline and create new opportunities for shoreline recreation.

- Policy OS-7.3: Promote a greater appreciation of the Oakland waterfront by preserving and enhancing waterfront views, promoting its educational value, and, exploring new and creative ways to provide public access to the shoreline without interfering with transportation and shipping operations or endangering public safety,
    - Action OS-7.3.1: Work with Caltrans to develop and implement an enhancement plan for the south side of the Bay Bridge, focusing on improved views to the water.
- Policy OS-9.3: Enhance neighborhood and city identity by maintaining or creating gateways. Maintain view corridors and enhance the sense of arrival at the major entrances to the city, including freeways, BART lines, and the airport entry. Use public art, landscaping, and signage to create stronger City and neighborhood gateways.

Objective OS-10: To protect scenic views and improve visual quality.

- Policy OS-10.1: Protect the character of existing scenic views in Oakland, paying particular attention to: a) views of the Oakland Hills from the flatlands; b) views of downtown and Lake Merritt; c) views of the shoreline; and d) panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations.
- Policy OS-10.2: Encourage site planning for new development, which minimizes adverse visual impacts and takes advantage of opportunities of new vistas and scenic enhancements.
- Policy OS-10.3: Enhance Oakland's underutilized visual resources, including the waterfront, creeks, San Leandro Bay, architecturally significant buildings or landmarks, and major thoroughfares.

The 2002 EIR did not include discussion of the Land Use Transportation Element (LUTE)[39] of the Oakland General Plan in its Aesthetics section. The LUTE includes the following policy, which encourages billboard removal (see Section 3.10, Land Use and Planning, for more details):

- Policy IC-4.3: Billboards should be reduced or eliminated in commercial and residential areas in Oakland neighborhoods through mechanisms that minimize or do not require the expenditures of City funds.

3.1.4 EXISTING CONDITIONS

As described in the 2002 EIR, the regional area under consideration is bounded by the nearby Oakland Hills to the east and the San Francisco peninsula to the more distant west. To the north are the Bay and Bay shoreline, and to the south are Alameda Island and the Bay. The visual character of the region is varied and represents three visually distinct zones, generally trending east to west: the uplands, flatlands, and the Bay. Within the uplands, the generally steep hills provide a mix of natural and developed views, and between the hills and the Bay, the flatlands show a highly urbanized mixed-use visual setting and the Bay has an industrial maritime shoreline, with the Bay waters and Bay Bridge to the west. The visual setting of the redevelopment program area is generally flat to very gently sloping, and is highly industrialized.

The project site is visually characterized by flat land developed with one- to four-story warehouses and administration/business buildings, industrial maritime and rail facilities (including cargo containers stacked four or more levels high), and undeveloped land. As described in the 2002 EIR, the area is typical of transportation/industrial development and is visually unremarkable. Public views

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

of the project site include relatively short-term foreground views from I-880, I-80 (the Bay Bridge), and other public roadways. In addition, there are important views from the redevelopment program area toward the Bay and the Bay Bridge, as well as from planned trail and open space areas. The 2002 EIR identified the OARB sub-district as being visible from the following viewing locations:

- From I-80, east-bound travelers experience short-term, foreground views of the proposed Gateway Park area, mid-ground views of the Outer Harbor, and background views of Oakland central business district and hills;
- From the elevated portions of West Grand Avenue, and I-880, west/north-bound motorists have short-term, mid-ground views of the vacant Subaru site and Baldwin railyard (northeast-most portion of the OARB sub-district);
- From elevated I-880, east/south-bound motorists have short-term, mid-ground views of the entire OARB;
- From the Outer Harbor, boaters have short-term, foreground views of the undeveloped future Gateway Park area, and industrial marine terminals; and
- From upper Maritime Street, motorists have short-term, foreground views of existing OARB buildings.

3.1.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Have a substantial adverse effect on a scenic vista;

b) Substantially damage scenic resources, including, but not limited to, trees, rock, outcroppings, and historic buildings within a state or locally designated scenic highway;

c) Substantially degrade the existing visual character or quality of the site and its surroundings;

d) Create a new source of substantial light or glare which would adversely affect daytime or night-time views in the area;

e) Introduce structures or landscape that would not or in the future cast substantial shadow on existing solar collectors (in conflict with California Public Resources Code §§ 25980-25986), photovoltaic cells, or impair the function of a building using passive solar heat collection;

f) Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space;

g) Cast shadow on a historic resource, as defined by California Environmental Quality Act Section 15064.5(a), such that it would substantially diminish/impair its eligibility for listing in the National Register of Historic Places, California Register of Historic Resources, or a local register of historical resources or a historical resource survey as defined by the PRC; or

h) Require an exception to the policies and regulation in the General Plan, Planning Code, or Uniform Building Code (UBC), and be inconsistent with policies and regulations in the General Plan, Planning Code, and UBC addressing the provision of adequate light related to appropriate uses.

These criteria are discussed below.

a) Would the project have a substantial adverse effect on a scenic vista?

The 2012 Project would result in the redevelopment of the OARB sub-district's Gateway Development Area and Port Development Area with single to multi-story buildings, roadways, parking areas, a rail terminal, associated rail right-of-way, road improvements, a road/rail grade separation, and varying amounts of public access/open space (see Chapter 2, Project Description, for more detail). As shown in Figure 3.1-2, the 2012 Project would also include the construction of up to nine billboards in locations near the I-80 Toll Plaza, along I-880 at West Grand Avenue, 12th, 13th, and 15th Streets.

As identified in the 2002 EIR, some short-term views of east-bound vehicle travelers on I-80 toward the Outer Harbor would be blocked for several seconds by redevelopment in the Gateway Development Area. These views are toward the industrialized portion of the Bay and do not constitute important views or scenic vistas.

Figures 3.1-3a through 3.1-3o, show views of the project site from vantage points along the Bay Bridge Toll Plaza and I-880. Photos of existing viewpoints (upper photographs) and photo simulation viewpoints (lower photographs) with the proposed billboards are shown in each viewpoint location in Figure 3.1-2. Figure 3.1-1 also shows the locations of each proposed billboard. Table 3.1-1 summarizes visual characteristics of the photo simulations from each of the viewpoints that vehicle travelers would experience along the Bay Bridge Toll Plaza and I-880. The short-term views of vehicle travelers traveling eastbound and westbound along I-880 also would be blocked for several seconds by the proposed billboards; however, similar to the Gateway Development Area, these views are toward the industrialized portion of the Bay.

Table 3.1-1: Views of Proposed Billboards

Viewpoint Location[a]	Billboard Number Visible	Location	Visual Characteristics of Location
1a	1, 2	Bay Bridge East of Toll Plaza	Foreground: Billboard 1 and freeway lanes Mid-ground: Billboard 2, warehouse-type building, light and utility poles, elevated portion of I-880 Background: Oakland Hills
1b	1	Bay Bridge East of Toll Plaza	Foreground: Traffic sign, freeway lane, median, and divider Mid-ground: Billboard 1, light and utility poles, industrial maritime facilities Background: City of San Francisco skyline and Yerba Buena Island
2a	2	Bay Bridge East of Toll Plaza	Foreground: Freeway lanes Mid-ground: Billboard 2, elevated portion of I-880 interchange, light and utility poles Background: Oakland Hills and Oakland central business district
2b	2	Bay Bridge East of Toll Plaza	Foreground: Billboard 2, freeway lanes and median Mid-ground: Industrial maritime facilities, lighting poles Background: Utility poles
3a	3, 4, 5	I-880 West Grand Avenue	Foreground: Billboards 3 and 4, freeway lanes, median, and divider Mid-ground: Part of Billboard 5, treetops, rooflines of buildings Background: Oakland central business district
3b	3	I-880 West Grand Avenue	Foreground: Billboard 3, freeway lanes, median, and divider, top of tree Mid-ground: Utility and light poles, freeway signs Background: Mount Tamalpais and Angel Island
4a	4, 5	I-880 West Grand Avenue	Foreground: Billboards 4 and 5, freeway lanes, median and divider Mid-ground: Roofline of buildings, elevated portion of I-880 Background: Oakland central business district
4b	3, 4	I-880 West Grand Avenue	Foreground: Freeway lanes, median, and divider Mid-ground: Billboards 3 and 4, rooflines of buildings, lighting and utility poles, shipping containers Background: Bay waters, Angel Island, and Mount Tamalpais
5b	5	I-880 West Grand Avenue	Foreground: Billboard 5, freeway lanes, medians, and divider Mid-ground: Roofline of buildings, utility and light poles, Bay waters Background: Mount Tamalpais, Angel Island, Emeryville marina area
6a	6	I-880 West Grand Avenue	Foreground: Billboard 6, freeway lanes, median, and divider, traffic sign Mid-ground: Roofline of building, maritime facilities, elevated portion of I-880, lighting pole Background: None
6b	6	I-880 West Grand Avenue	Foreground: Freeway lane, median, and divider Mid-ground: Billboard 6, elevated portion of I-880, lighting poles, warehouse-type buildings Background: Oakland and Berkeley Hills
7a	7, 8, 9	I-880 at 12th, 14th, and 15th Streets	Foreground: Billboard 7, freeway lane, median, divider Mid-ground: Part of Billboards 8 and 9, rail yard and railroad tracks, shipping containers, lighting poles Background: Industrial maritime facilities, San Francisco hills
8a	8, 9	I-880 at 12th and 14th Streets	Foreground: Billboard 8, freeway lanes, median, divider, shipping containers, railyard and railroad tracks Mid-ground: Billboard 9, lighting and utility poles Background: Industrial maritime facilities, San Francisco hills
8b	6, 7, 8	I-880 West Grand Avenue, I-880 at 14th and 15th Streets	Foreground: Billboards 7 and 8, freeway lanes, median, divider Mid-ground: Billboard 6, elevated portions of I-880, lighting and utility poles, freeway signs Background: Oakland and Berkeley Hills
9b	7, 8, 9	I-880 at 12th, 14th, and 15th Streets	Foreground: Billboards 7, 8, and 9, freeway lanes, median, divider Mid-ground: Lighting and utility poles, elevated portions of I-880, freeway signs Background: Berkeley Hills

[a] "a" represents viewpoints for vehicle travelers traveling eastbound on I-80 and southbound on I-880.
"b" represents viewpoints for vehicle travelers traveling westbound on I-80 and northbound on I-880.

Note: Viewpoints 5a, 7b, and 9a have been omitted from the figures and this table because viewpoints 6a, 6b, and 8a, respectively, cover similar viewpoint locations.

Source: Foster Interstate Media, Inc. and LSA Associates, Inc., 2012.

LSA

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0 400 800
FEET

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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KEY

1. Bay Bridge 300' East of Toll Plaza - West & East Face
2. Bay Bridge 800' East of Toll Plaza - West & East Face
3. I-880 West Grand 500' North of Maritime - North & South Face
4. I-880 West Grand South of Maritime - North & South Face
5. I-880 West Grand 600' South of Maritime - North & South Face
6. I-880 West Grand 1,800' South of Maritime
7. I-880 at 15th Street - North & South Face
8. I-880 at 14th Street - North & South Face
9. I-880 at 12th Street - North & South Face

8b Viewpoint Location

4 Location of Proposed Billboard

FIGURE 3.1-2

2012 Oakland Army Base Project

Viewpoint Location and Proposed Billboard Site Map

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LSA

FIGURE 3.1-3a

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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LSA

FIGURE 3.1-3b

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3c

2012 Oakland Army Base Project
Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3d

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3e

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3f

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3g

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3h

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3i

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3j

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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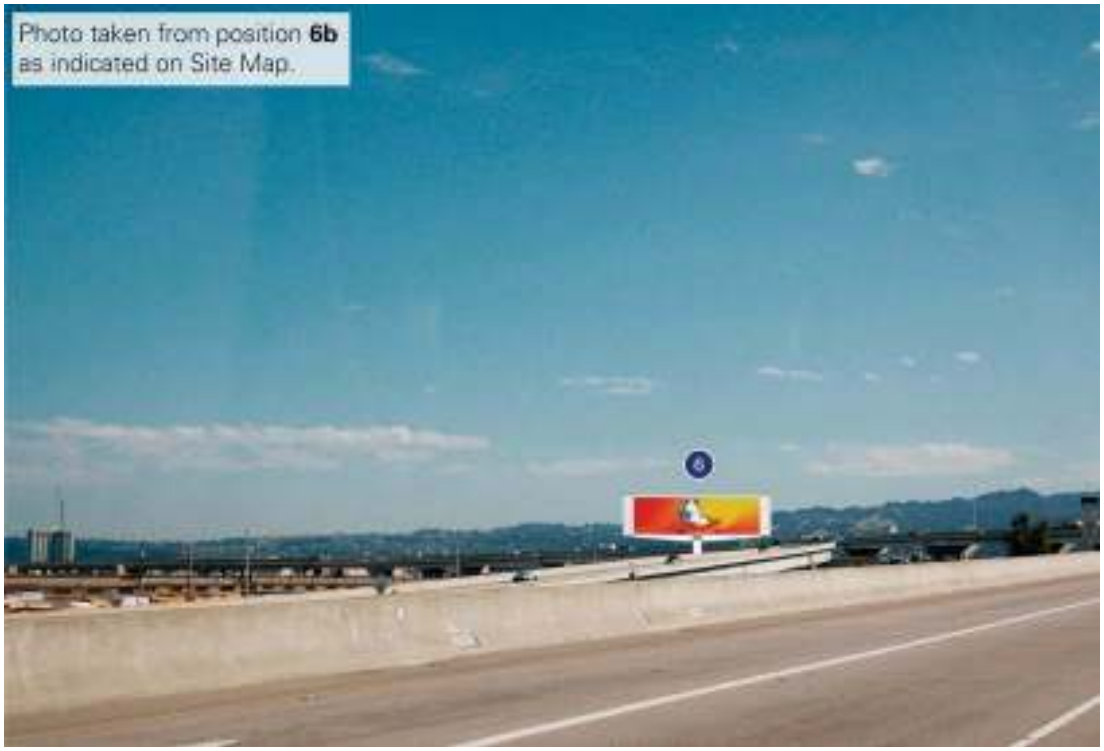

FIGURE 3.1-3k

2012 Oakland Army Base Project
Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-31

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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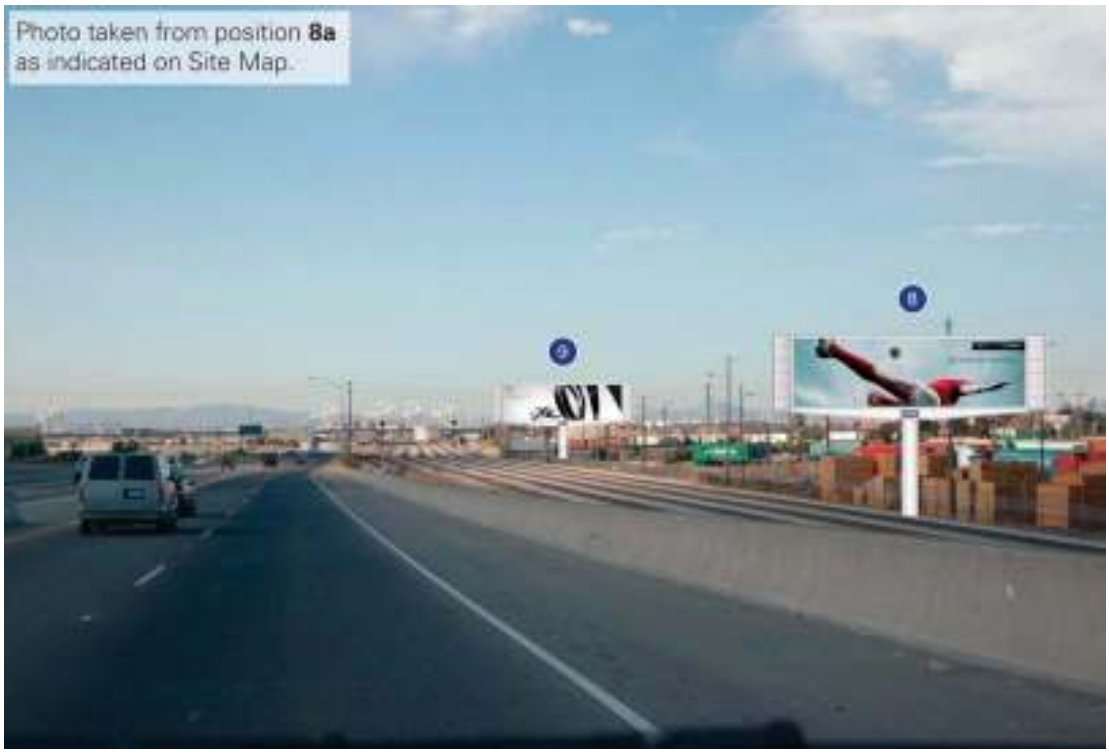

FIGURE 3.1-3m

2012 Oakland Army Base Project
Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3n

2012 Oakland Army Base Project

Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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FIGURE 3.1-3o

2012 Oakland Army Base Project
Proposed Billboard Visual Simulations

SOURCE: FOSTER INTERSTATE MEDIA, INC., MARCH 2012.

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MacArthur Freeway near Bay Bridge Toll Plaza Looking East

Figure 3.1-3a and Figure 3.1-3c (Viewpoint locations 1a and 2a, respectively) show a view of the eastbound portion of the MacArthur Freeway near the Bay Bridge Toll Plaza. The upper photographs show the view as it currently exists and the lower photographs show a view of the eastbound portion of the MacArthur Freeway with the proposed billboards (specifically Billboards 1 and 2) that would be constructed as part of the 2012 Project. Background views offer a panoramic view of the Oakland Hills and the Oakland central business district to the far right side. Middle ground views are of the elevated portion of the I-880/I-80/West Grand Avenue interchange, lighting and utility poles, the upper portions of warehouse-type buildings, freeway signs, median with fencing, and several ornamental trees and shrubs on t he right side. The elevated portion of the I-880/I-80/West Grand Avenue interchange partially obstructs the panoramic view of the Oakland Hills for several seconds as one continues to travel eastbound on MacArthur Freeway. Foreground views are of vehicles traveling eastbound on MacArthur Freeway travel lanes. The lower photos show the proposed billboards, each elevated on top of a pole, appearing in the middle ground view. The billboard poles are wider than the lighting and utility poles but do not significantly obstruct the panoramic view of the Oakland Hills. The elevated billboards are above the panoramic view of the Oakland Hills, but as one travels further eastbound, the elevated Billboard 2 partially covers a very small portion of the panoramic view of the Oakland Hills for several seconds. As previously described, a portion of the elevated interchange also obstructs the view of the Oakland Hills. The proposed billboards do not obstruct panoramic views of the Oakland central business area from these viewpoint locations.

I-880/West Grand Avenue Interchange Looking East

Figure 3.1-3e and Figure 3.1-3g (Viewpoint locations 3a and 4a, respectively) show a view of the eastbound portion of the I-880/West Grand Avenue interchange. The upper photographs show the view as it currently exists and the lower photographs shows a view of the eastbound portion of the I-880/West Grand Avenue interchange with the proposed billboards (specifically Billboards 3, 4, and 5) that would be constructed as part of the 2012 Project. Background views offer a panoramic view of the Oakland central business district. Middle ground views are of treetops, rooflines of buildings, freeway and street signs, and lighting and poles. Foreground views are of vehicles travelling eastbound on the I-880/West Grand Avenue interchange travel lanes, freeway median and dividers. The lower photos show the proposed billboards, each elevated on top of a pole, appearing in the middle ground and foreground views. The elevated billboards partially obstruct a portion of the panoramic view of the Oakland central business area from these viewpoint locations for several seconds.

I-880 South Looking Southwest

Figure 3.1-3j, Figure 3.1-3l, and Figure 3.1-3m (Viewpoint locations 6a, 7a, and 8a, respectively) show views of the southbound portion of I-880 transitioning from its elevated portion toward the street level. The upper photographs show the view as it currently exists and the lower photographs shows a view of the southbound portion of I-880 transitioning from its elevated portion towards the street level with the proposed billboards (specifically Billboards 6, 7, 8, and 9) that would be constructed as part of the 2012 Project. Background views offer a panoramic view of the industrial maritime facilities (i.e., cranes) and the San Francisco hills. Middle ground views of the elevated portion of the I-880 are of the elevated portion of I-880 itself, maritime facilities underneath the

elevated portion, and a lighting pole. Middle ground views of the street level portion of I-880 are of the railyard and railroad tracks, shipping cargo containers, and lighting and utility poles to the right side. Foreground views are of vehicles travelling on the southbound I-880 travel lanes, freeway median, divider, and traffic sign. The lower photos show the proposed billboards, each elevated on top of a pole, appearing in the middle ground and foreground views. The elevated billboards partially obstruct portions of the panoramic views of the maritime facilities and San Francisco hills for several seconds if one looks to the right side from these viewpoint locations.

The 2012 Project would be visible from other locations than those selected viewpoints shown in the visual simulations for the proposed billboards (Figure 3.1-2). However, the farther viewers are from the project site, the smaller would be the portion of the total view of the project site and the proposed billboards from a public viewpoint (such as Yerba Buena Island, the Outer Harbor Entrance Channel, Alameda Island, and panoramic views from hillside locations) obscured by development in the project area, as compared to the area immediately adjacent to the project site. As a result, the proposed billboards would not have a significant impact on views of the Bay and Bay shoreline from hillside locations and urbanized flatlands. Therefore, development of the 2012 Project would have a less-than-significant impact on scenic vistas.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to scenic vistas than were described in the 2002 EIR.

I-880 North Looking Northeast

Figure 3.1-3o, Figure 3.1-3n, and Figure 3.1-3k (Viewpoint locations 9b, 8b, and 6b, respectively) show views of the northbound portion of I-880 transitioning from the street level toward the elevated portion of the freeway. The upper photographs show the view as it currently exists and the lower photographs shows a view of the northbound portion of I-880 transitioning from the street level toward the elevated portion of the freeway with the proposed billboards (specifically Billboards 6, 7, 8, and 9) that would be constructed as part of the 2012 Project. Background views offer a panoramic view of the Oakland and Berkeley hills. Middle ground views are of the elevated portion of the I-880/West Grand Avenue interchange, lighting and utility poles, freeway signs, warehouse-type buildings, and shipping cargo containers. Foreground views are of vehicles travelling on the northbound I-880 travel lanes, and freeway median and divider. The lower photos show the proposed billboards, each elevated on top of a pole, appearing in the middle ground and foreground views. The elevated billboards partially obstruct portions of the panoramic views of the Oakland and Berkeley hills for several seconds if one looks to the left side from these viewpoint locations.

Elevated Portion of I-880 North Looking Northeast

Figure 3.1-3i, Figure 3.1-3h, and Figure 3.1-3f (Viewpoint locations 5b, 4b, and 3b, respectively) show views of the northbound portion of the elevated portion of I-880 towards the I-80/I-880 interchange. The upper photographs show the view as it currently exists and the lower photographs shows a view of the northbound portion of the elevated portion of I-880 with the proposed billboards (specifically Billboards 3, 4, and 5) that would be constructed as part of the 2012 Project. Background views offer a panoramic view of the Mount Tamalpais, Angel Island, the Emeryville marina area, and Bay waters. Middle ground views are of the elevated portion of I-880 itself, rooflines of buildings,

warehouse-type buildings, shipping cargo containers, lighting and utility poles, freeway signs, several treetops. Foreground views are of vehicles travelling on the northbound I-880 travel lanes, and freeway median and divider. The lower photos show the proposed billboards, each elevated on top of a pole, appearing in the middle ground and foreground views. The elevated billboards partially obstruct portions of the panoramic views of the Mount Tamalpais and Angel Island for several seconds if one looks to the left side from these viewpoint locations. Taken together, billboards 3, 4, and 5 constitute a series of three billboards that would sequentially block views towards the hills on the left side of the view for several seconds each.

I-880/West Grand Interchange Looking East

Figure 3.1-3b and Figure 3.1-3d (Viewpoint locations 1ba and 2b, respectively) show a view of the eastbound portion of the I-880/West Grand Avenue Interchange near the Bay Bridge Toll Plaza. The upper photographs show the view as it currently exists and the lower photographs shows a view of the eastbound portion of the I-880/West Grand Avenue Interchange with the proposed billboards (specifically Billboards 1 and 2) that would be constructed as part of the 2012 Project. Background views offer a partial panoramic view of the San Francisco skyline and Yerba Buena Island. Middle ground views are of industrial maritime facilities (i.e., cranes), utility and lighting poles, traffic sign, and the rear of a freeway sign. Foreground views are of vehicles travelling westbound on the I-880/West Grand Avenue interchange and of the eastbound travel lanes, median and divider. The lower photos show the proposed billboards, each elevated on top of a pole, appearing in the middle ground view. The billboard poles are wider than the lighting and utility poles but do not significantly obstruct any panoramic views. The elevated billboards are above the panoramic view of the San Francisco skyline and Yerba Buena Island and do not obstruct any panoramic views from these viewpoint locations.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock, outcroppings, and historic buildings within a state or locally designated scenic highway?

As identified in the 2002 EIR, redevelopment of the OARB sub-district area would remove warehouse structures contributing to the OARB Historic District. The 2012 Project would deconstruct and remove buildings contributing to the OARB Historic District in order to accommodate the new construction and infrastructure. The contributing buildings have distinctive architectural elements, including rooflines with double eaves and clerestory windows. The warehouse buildings are not clearly visible from I-580, a State scenic highway. However, the buildings are visible from local roadways and I-80, a locally designated scenic route, and a portion of the State scenic highway system. As concluded in the 2002 EIR, development of the 2012 Project would eliminate visual

evidence of a specific period in the history of West Oakland military transportation, and this impact would be considered as a significant and unavoidable visual impact.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to scenic resources than were described in the 2002 EIR.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: No Feasible Mitigation Measures Identified

2012 Mitigation: No Feasible Mitigation Measures Identified

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

The 2012 Project would deconstruct and remove existing buildings and construct new buildings, infrastructure, and public open space. As described in the 2002 EIR, redevelopment of the OARB sub-district area would alleviate existing visual blight, and would develop currently vacant parcels into modern land uses and replace outdated and/or visually derelict buildings with new and attractive buildings and associated landscaping appropriate to use. Consistent with General Plan Policy OS-9.3, the redevelopment of the project site would create a visually appealing gateway to the City of Oakland.

The construction of 9 billboards along the Bay Bridge Toll Plaza and I-880 (Refer to Criterion a and Figure 3.1-2 for more detail on views of the proposed billboards) as part of the 2012 project would not substantially degrade the existing visual character or quality of the site and its surroundings because views are toward the industrialized portion of the Bay and do not constitute important views or scenic vistas. In addition, the proposed billboards would only partially obstruct panoramic views of mountains, hills, Bay waters, and city skylines only for several seconds at a time.

In addition, as a result of additional nighttime operations lighting as part of the 2012 Project, changes to existing patterns of light or glare and nighttime views would be noticeable in currently vacant and undeveloped areas, such as the proposed open space area and southern portion of the project site. The proposed billboards that would be located near the I-80 Toll Plaza, along I-880 at West Grand Avenue, 12th 13th, and 15th Streets also would contribute to new exterior lighting in the project area. Because the project site is located in a highly industrialized area and, when viewed from a distance during daytime and nighttime, increased lighting on the site would generally blend with existing development (Refer to Criterion d below for more detail on light and glare impacts). Therefore, the new sources of lighting that would be generated from the 2012 Project would not substantially degrade the existing visual character or quality of the site and its surroundings.

The 2012 Project would improve, not degrade, the existing visual character of the site and its surroundings. The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any significant impacts related to visual character or quality than were described in the 2002 EIR.

2002 Impact: No Impact

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

d) Would the project create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?

As identified in the 2002 EIR, security and nighttime operations lighting are present throughout the OARB and Maritime sub-districts, and new development within the sub-districts would require additional nighttime illumination for security. The new lighting systems would alter existing patterns of light or glare and nighttime views across property boundaries. Changes to existing patterns of light or glare and nighttime views would be noticeable in currently vacant and undeveloped areas, such as the proposed open space area and southern portion of the project site. The 2012 Project also would include the construction of up to nine billboards in locations near the I-80 Toll Plaza, along I-880 at West Grand Avenue, 12th 13th, and 15th Streets. The proposed billboards also would contribute to new exterior lighting in the project area.

The project site is located in a highly industrialized area and, when viewed from a distance during daytime and nighttime, increased lighting on the site would generally blend with existing development. Particularly, daytime lighting would generally blend with existing light industrial uses within the project area, and nighttime lighting would blend with existing maritime operation lighting visible along the shoreline, as well as highway safety and roadway lighting and vehicle headlights visible along Maritime Street, the elevated portion of West Grand Avenue, and the I-880 and I-80 corridors.

The 2002 EIR concluded that implementation of Mitigation Measure 4.11-1 throughout the project area and Mitigation Measure 4.11-2 in natural areas, would reduce light and glare impacts to a less-than-significant level. Mitigation 4.11-1 would require new lighting to be designed to minimize off-site light spillage, and would prohibit “stadium” style lighting. Mitigation 4.11-2, would require that new lighting near or at the proposed Gateway Park be shielded to prevent light spillage into natural areas.

The proposed billboards along the eastern edge of the project site (billboards 7, 8, and 9) may create a new source of light in the residential area of West Oakland in proximity to the project site. However, these billboards would be separated from the residential areas by I-880, and existing buildings, fences and vegetation (including street trees), would reduce potential impacts associated with the new source of light. Certain residents currently have views over I-880 and are therefore likely to be able to see the billboards from their homes. However, these residents already have a substantial amount of ambient light from existing port-related activities in views toward the north in which the billboards

would be visible. Therefore the billboards will not likely create a substantial new source of light in these areas.

The 2012 Project would also be subject to Standard Condition of Approval SCA AES-1 and the Port of Oakland Exterior Lighting Policy. Standard Condition of Approval SCA AES-1 would require proposed light fixtures to be adequately shielded in order to prevent unnecessary glare onto adjacent properties and for the proposed lighting fixtures to be approved by the City's Planning and Zoning Division and Electrical Services Division. As a result, Mitigation Measure 4.11-2 is superseded with SCA AES-1 for the 2012 Project. The Port of Oakland Exterior Lighting Policy would require the project applicant to submit an exterior lighting plan which complies with mitigations specified in the policy for glare control and energy conservation prior to issuance of a Port of Oakland Building Permit. Additionally, the proposed billboards would be subject to the State's Outdoor Advertising Act, which requires the project applicant to obtain an Outdoor Advertising permit to Caltrans. Therefore, with implementation of the 2002 EIR mitigation measure and compliance with the City's Standard Condition of Approval, the Port's Exterior Lighting Policy, and the State's Outdoor Advertising Act, the 2012 Project would not create new sources of substantial light or glare that would adversely affect daytime or nighttime views in the surrounding area.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to light and glare than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.11-1 and 4.11-2

2012 Mitigation: 2002 EIR Mitigation Measures 4.11-1 and 4.11-2, superseded by SCA AES-1

Significance After Implementation: Less Than Significant (No New Impact)

e) Would the project introduce structures or landscape that would not or in the future cast substantial shadow on existing solar collectors (in conflict with California Public Resources Code §§ 25980-25986), photovoltaic cells, or impair the function of a building using passive solar heat collection?

Currently, no active or passive solar collector systems are present on the project site. The 2012 Project would include the installation of solar photovoltaic (PV) panels on roof areas of the proposed warehouse buildings. New construction of other buildings on the project site would be of similar height (up to 60 feet) and would not likely cast shadows on the proposed solar PV system such that it would substantially affect the solar PV system's operation.

As identified in the 2002 EIR, new construction within the redevelopment program area that contains solar systems would be subject to Mitigation Measures 4.11-3, 4.11-4, and 4.11-5, which require: 1) new active or passive solar systems within or adjacent to the project area be set back from the property line a minimum of 25 feet; 2) design review to show the proposed structures would not substantially impair the operation of the solar systems; and 3) the City and Port to coordinate with respect to the design of new, permanent buildings constructed along the Port/Gateway boundary to minimize con-

flicts over solar access. Therefore, with implementation of these mitigation measures, the introduction of new structures and landscapes under the 2012 Project would not cast substantial shadows onto the proposed solar PV cells. Therefore, this impact would be considered less than significant.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to shadows on solar collectors than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.11-3, 4.11-4, and 4.11-5

2012 Mitigation: 2002 EIR Mitigation Measures 4.11-3, 4.11-4, and 4.11-5

Significance After Implementation: Less Than Significant (No New Impact)

f) Would the project cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space?

Currently, the project site is characterized by a complex of one to four-story warehouses and administration buildings, maintenance facilities, rail yards, and vacant land. The 2012 Project would include the construction of various single to multi-story building structures and facilities with building heights of up to 60 feet. Warehouse or research and development buildings and associated landscaping elements would be constructed adjacent to the proposed Gateway Park area on the northern portion of the project site along the Bay shoreline. The construction of the proposed buildings would not likely cast shadows on the proposed Gateway Park area such that it would substantially impair the beneficial use of the public open space.

As identified in the 2002 EIR, new construction adjacent to a public open space would be subject to Mitigation Measure 4.11-6, which requires design review to show that the proposed buildings would not substantially impair enjoyment of the public using the space. Therefore, with implementation of this mitigation measure, the introduction of new structures and landscapes under the 2012 Project would not cast substantial shadows to the proposed Gateway Park area. This impact would be considered less than significant.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to shadows on public park or open space than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.11-6

2012 Mitigation: 2002 EIR Mitigation Measure 4.11-6

Significance After Implementation: Less Than Significant (No New Impact)

g) Would the project cast shadow on a historic resource, as defined by California Environmental Quality Act Section 15064.5(a), such that it would substantially diminish/impair its eligibility for listing in the National Register of Historic Places, California Register of Historic Resources, or a local register of historical resources or a historical resource survey as defined by the PRC?

The 2012 Project would deconstruct and remove buildings contributing to the OARB Historic District in order to accommodate the new construction and infrastructure. This condition constitutes a significant and unavoidable impact to cultural resources impact 4.6-2. Therefore, the 2012 Project would not cast shadows on a historic resource and as a result, no impact would occur.

2002 Impact: No Impact

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact (No New Impact)

h) Would the project require an exception to the policies and regulation in the General Plan, Planning Code, or Uniform Building Code (UBC), and be inconsistent with policies and regulations in the General Plan, Planning Code, and UBC addressing the provision of adequate light related to appropriate uses?

As identified in the 2002 EIR, redevelopment of the project site would not require an exception to the policies and regulations in the General Plan, Planning Code, or the International Building Code (IBC), which replaced the UBC, and would not be inconsistent with policies and regulations in the General Plan, Planning Code, or IBC addressing the provision of adequate light related to appropriate uses. Therefore, no impact would occur.

2002 Impact: No Impact

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact (No New Impact)

3.1.6 CUMULATIVE IMPACTS

The geographic scope for assessing the potential for cumulative aesthetics impacts consists of the City, surrounding jurisdictions, and the Bay. The Existing Conditions subsection above describes past, present, and foreseeable future conditions in these areas. The following discussion evaluates the potential for cumulative impacts.

The 2012 Project would alter views of the Bay and Bay shoreline from public locations such as Yerba Buena Island, the Oakland Outer Harbor, portions of the Bay Bridge, I-80, I-880, and West Grand Avenue. The 2012 Project would also provide new public Bay and Bay shoreline views from the proposed Gateway Park.

Implementation of the 2012 Project and cumulative development would result in visual changes to neighborhoods in Oakland associated with the intensification of already-developed parcels. Cumulative development, in combination with the 2012 Project, would continue to result in new buildings, and other structures such as billboards, of varying size and scale being developed on infill or vacant sites throughout the area. In general, these visual changes would not adversely affect the visual quality of Oakland as they would be subject to the City's design review process. The purpose of the design review process is to consider the design treatment and relationship to the surrounding built environment and to ensure no significant adverse aesthetic impacts would result. The redevelopment of the project site would create a more appealing maritime shoreline environment and improve linkages between the Port of Oakland and the City. Aesthetics-related policies of the City's General Plan would protect scenic resources and the visual quality of the City. These policies and the design review process are expected to enhance the quality of the visual environment in the City of Oakland over time, and similar policies and design review procedures would be implemented in surrounding cities, with similar expected effects. Therefore, the 2012 Project would not compromise scenic views, including views to the Bay and Bay shoreline.

Cumulative development in the City would generally be expected to increase nighttime lighting; however, the City and surrounding jurisdictions are located in an urban environment where nighttime lighting is appropriate to its context. Other cumulative projects within the City of Oakland would be subject to SCA AES-1. Therefore, the 2012 Project would not make a significant cumulative contribution to patterns of light and glare.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project and would not result in any new impacts or a substantial increase in the previously identified significant impacts related to aesthetics than were described in the 2002 EIR. Implementation of previously imposed mitigation measures (Mitigation Measures 4.11-1 through 4.11-6), SCA AES-1, compliance with the Port of Oakland Exterior Lighting Policy, Caltrans permitting, the State's OAA, and the City's design review would ensure the 2012 Project would not make a significant cumulative contribution to aesthetics. Therefore, the 2012 Project would not result in or contribute to any significant cumulative aesthetics impacts.

3.1.7 CONCLUSIONS

Redevelopment of the Army Base would not result in significant new aesthetics impacts or a substantial increase in the severity of previously identified significant aesthetics impacts compared to the 2002 EIR. Therefore, impacts would be similar to those addressed in the 2002 EIR, and would continue to be less than significant, except for demolition of historic resources. Previously imposed mitigation measures from the 2002 EIR have been identified and, where appropriate, have been clarified, refined, revised, or deleted. No new mitigation measures are required.

3.1.8 REFERENCES

Oakland, City of, 1974. *Scenic Highways; Oakland Comprehensive Plan*. September.

Oakland, City of, 1996. *Open Space, Conservation, and Recreation; Oakland General Plan*. June.

Oakland, City of, 1998. *Land Use and Transportation Element; Oakland General Plan*. March.

3.2 AGRICULTURE AND FOREST RESOURCES

This section evaluates the potential agriculture and forest resources impacts of the 2012 Project. Agriculture and forest resources were not addressed in the 2002 EIR and are addressed herein. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not mitigation measures are required.

3.2.1 PRIOR ANALYSIS AND CONCLUSIONS

The 2002 EIR did not address agriculture and forest resources.

3.2.2 STANDARD CONDITIONS OF APPROVAL

There are no Standard Conditions of Approval relating to agriculture and forest resources that apply to this project.

3.2.3 UPDATED REGULATORY SETTING

As the 2002 EIR did not address agriculture and forest resources, there is no update to the regulatory setting. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

3.2.4 EXISTING CONDITIONS

The project site is located in an urban industrial setting. There are no areas of agricultural or forest use located within or in the vicinity of the project site.

3.2.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use;

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract;

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));

d) Result in the loss of forest land or conversion of forest land to non-forest use; or

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

These criteria are discussed below.

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use?

As described in the Land Use section of the 2002 EIR, the entire region under consideration is urbanized. There are no agricultural resources located on or near the project site. The site is classified as "Urban and Built-Up Land" by the State Department of Conservation.[40] Therefore, the 2012 Project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use.

2002 Impact: 2002 EIR did not address agriculture and forest resources.

2012 Impact: No Impact

2002 Mitigation: 2002 EIR did not address agriculture and forest resources.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The project site is zoned as Industrial General (IG) and Commercial Industrial Mix (CIX-1), and is not zoned for agricultural use. No part of the project area is under a Williamson Act contract.[41] Therefore, the 2012 Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

2002 Impact: 2002 EIR did not address agriculture and forest resources.

2012 Impact: No Impact

2002 Mitigation: 2002 EIR did not address agriculture and forest resources.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

[40] California Department of Conservation, 2011. Division of Land Resource Protection, Farmland Mapping and Monitoring Program. *Alameda County Important Farmland 2010* (map). Website: www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx (accessed August 29, 2011).

[41] California Department of Conservation, 2010. *Alameda County Williamson Act Lands 2009* (map). Website: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Map%20and%20PDF/Alameda/AlamedaWA_09_10.pdf (accessed August 29, 2011).

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The project site is zoned as Industrial General (IG) and Commercial Industrial Mix (CIX-1), and is not zoned for forest land or timberland production. Therefore, implementation of the 2012 Project would not conflict with existing zoning for forest land or result in the rezoning of forest land or other land used for the production of timber.

2002 Impact: 2002 EIR did not address agriculture and forest resources.

2012 Impact: No Impact

2002 Mitigation: 2002 EIR did not address agriculture and forest resources.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

The 2012 Project would result in the redevelopment of already-developed land in an urbanized area. Although a small number of trees are dispersed around the project site, these trees do not constitute forest land. Therefore, the 2012 Project would not result in the loss of forest land.

2002 Impact: 2002 EIR did not address agriculture and forest resources.

2012 Impact: No Impact

2002 Mitigation: 2002 EIR did not address agriculture and forest resources.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Implementation of the 2012 Project would not involve other changes in the existing environment which, due to their location of nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

2002 Impact: 2002 EIR did not address agriculture and forest resources.

2012 Impact: No Impact

2002 Mitigation: 2002 EIR did not address agriculture and forest resources.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

3.2.6 CUMULATIVE IMPACTS

As noted above, the entire region is urbanized. The site is not used for agricultural production nor does it support forestry resources. Implementation of the 2012 Project would not result in any impacts to agriculture and forest resources; nor would the 2012 Project would not contribute to any cumulative agriculture and forest resources impact in the region.

3.2.7 CONCLUSIONS

As discussed above, there would be no impact to agriculture and forest resources and no mitigation measures are required. There are no changes in the project, change in circumstances, or new information that would result in new significant environmental effects on agriculture and forest resources, or a substantial increase in the severity of a previously identified significant environmental effect on agriculture and forest resources.

3.2.8 REFERENCES

California Department of Conservation, 2010. *Alameda County Williamson Act Lands 2009* (map). Website: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Map%20and%20PDF/Alameda/Alameda WA_09_10.pdf (accessed August 29, 2011).

California Department of Conservation, 2011. Division of Land Resource Protection, Farmland Mapping and Monitoring Program. *Alameda County Important Farmland 2010* (map). Website: www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx (accessed August 29, 2011).

3.3 AIR QUALITY

This section evaluates the potential air quality impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant air quality impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant air quality impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

As previously stated in Chapter 1, Introduction, since information on the above mentioned air quality issues was known, or could have been known when the 2002 EIR was being prepared, it is not legally "new information" as specifically defined under CEQA. However, an analysis of the proposed 2012 Project relying on the previously recommended May 2011 BAAQMD *CEQA Guidelines*, and thresholds[42], has nevertheless been conducted in order to provide more information to the public and decision makers, and in the interest of being conservative. Although the analysis in this Addendum evaluates air quality using both the 2002 EIR thresholds (based upon BAAQMD 1999 CEQA Thresholds) and the BAAQMD May 2011 *CEQA Guidelines* and Thresholds), significance determinations are based on the thresholds from the 2002 EIR. Nevertheless, the City will impose its Standard Conditions of Approval, revise/clarify previously approved mitigation measures from the 2002 EIR and impose other Recommended Measures (that are not legally required mitigation measures), as detailed below.

3.3.1 PRIOR ANALYSIS AND CONCLUSIONS

3.3.1.1 2002 EIR Impact Findings

The 2002 EIR concluded that the 2002 Project would have residual significant and unavoidable impacts related to diesel emissions construction equipment exhaust; diesel emissions from increased port and maritime operations and trucking activities; vehicle emissions from passenger vehicles and delivery trucks:

> **Impact 4.4-2:** Construction Equipment and Diesel Emissions. The 2002 EIR concluded that construction equipment exhaust used on the project site could increase levels of NO_x, ROG, CO, and PM_{10} that could exceed 15 tons per year, or result in substantial increase in diesel emissions.
>
> **Impact 4.4-3:** Maritime and Rail Operations. The 2002 EIR concluded that increased Port maritime and rail operations, as well as trucking activities associated with redevelopment operations would emit NO_x, ROG, and PM_{10} in excess of 15 tons per year or 80 pounds per day, substantially increase diesel emissions, and potentially expose pollution-sensitive receptors to substantial pollutant concentrations.

[42] On March 5, 2012, the Alameda County Superior Court issued a Judgment invalidating the May 2011 BAAQMD Thresholds and BAAQMD recommends the Thresholds not be used. Nevertheless, in the absence of further technical guidance, the City is generally continuing to use the May 2011 BAAQMD Guidelines in its CEQA review.

Impact 4.4-4: Vehicle Emissions. The 2002 EIR concluded that passenger vehicles and delivery trucks associated with redevelopment would emit NO_x, ROG, CO, and PM_{10} in excess of 15 tons per year or 80 pounds per day.

The 2002 EIR concluded potentially significant impacts related to fugitive dust and the routine operation and maintenance of buildings, which could be reduced to less-than significant levels:

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

Impact 4.4-5: Operation of Buildings. The 2002 EIR concluded that space and water heating, as well as routine maintenance of buildings on the project site could emit NO_x, ROG, CO, and PM_{10} in quantities that could exceed thresholds.

The 2002 EIR concluded that the 2002 Project would have less-than-significant impacts on odorous emissions:

Impact 4.4-6: Odors. The 2002 EIR concluded that the proximity of the New Intermodal Facility to West Oakland, and of the EBMUD Main wastewater treatment plan to the project site, could expose individuals to odorous emissions.

Cumulative Air Quality Impacts. The 2002 EIR concluded that the project would result in significance cumulative air quality impacts associated with emissions of NO_x, ROG, CO, PM_{10}, $PM_{2.5}$ and diesel exhaust. This impact was considered significant and unavoidable.

3.3.1.2 2002 EIR Mitigation Measures

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

Mitigation Measure 4.4-1: Contractors shall implement all BAAQMD's "Basic" and Optional" PM_{10} (fugitive dust) control measures at all sites, and all "Enhanced" control measures at sites greater than four acres. *(Note: This mitigation measure is superseded by SCA AIR-2.)*

For the potentially significant impact related to construction equipment and diesel emissions, the 2002 EIR identified the following mitigation measure; however, the residual impact is considered significant and unavoidable:

Mitigation Measure 4.4-2: Contractors shall implement exhaust control measures at all construction sites. *(Note: This mitigation measure is superseded by SCA AIR-2.)*

For significant impact related to maritime and rail operations, the 2002 EIR identified the following mitigation measures to reduce the impact; however, the residual impact is considered 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 measureable reductions within specific time periods.

Mitigation Measure 4.4-4: The City and the Port shall jointly create, maintain, and fund on a fair share basis, a truck diesel emission reduction program. The program shall be sufficiently funded to strive to reduce redevelopment related contributions to local West Oakland diesel emissions to less than significant levels, consistent with applicable federal, State, and local air quality standards. The adopted program shall define measureable reduction within specific time periods.

For significant impact related to vehicle emissions, the 2002 EIR identified the following mitigation measure to reduce the impact; however, the residual impact is considered significant and unavoidable:

Mitigation Measure 4.4-5: Major developers[43] 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 the BAAQMD has identified as appropriate for local implementation.

For the potentially significant impact related to the operation of buildings, the 2002 EIR identified the following mitigation measure to reduce the impact to a less-than-significant level:

Mitigation Measure 4.4-6: Title 24 of the Uniform Building Code (UBC) requires that new construction include energy-conserving fixtures and designs. Additionally, the City and Port shall implement sustainable development policies and strategies related to new development design and construction.

For the significant impact related to cumulative air emissions, the 2002 EIR identified the following mitigation measure to reduce the impact; however, the residual impact is considered significant and unavoidable:

Mitigation Measure 5.4-1: The City and the Port shall encourage, lobby, and potentially participate in emission reduction demonstration projects that promote technological advances in improving air quality.

Such encouragement, lobbying and participation may include the following:

- Retrofitting locomotive engines to meet current federal standards.
- Using reduced sulfur fuels in ships while the ships are in the San Francisco Bay.

[43] Defined as City, Port, and private developers whose subsequent redevelopment activity would generate more than 20,000 square feet of employment-generating land uses, or that would generate 100 or greater local jobs.

- Treating NO_x with selective catalytic reductions.
- Implementing random roadside emissions tests and developing a system of fines for trucks not in compliance with emission regulations.
- Establishing emissions-based berthing fees.
- Buying relatively old, highly polluting cars to take them off the road.

3.3.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

SCA AIR-1: Construction Management Plan
Prior to issuance of a demolition, grading, or building permit

The project applicant shall submit to the Planning and Zoning Division and the Building Services Division 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)
Ongoing throughout demolition, grading, and/or construction

During construction, the project applicant shall require the construction contractor to implement all of the following applicable measures recommended by the Bay Area Air Quality Management District (BAAQMD):

a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
f) Limit vehicle speeds on unpaved roads to 15 miles per hour.

g) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not is use or reducing the maximum idling time to five minutes (as required by Title 13, Section 2485, of the California Code of Regulations. Clear signage to this effect shall be provided for construction workers at all access points.

h) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be shall be minimized either by shutting equipment off when not is use or reducing the maximum idling time to five minutes and fleet operators must develop a written idling policy (as required by Title 13, Section 2449 of the California Code of Regulations.)

i) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

j) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted on other required on-site signage.

k) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

l) All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.

m) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

n) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).

o) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.

p) Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind blown dust. Wind breaks must have a maximum 50 percent air porosity.

q) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

r) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

s) All trucks and equipment, including tires, shall be washed off prior to leaving the site.

t) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.

u) Minimize the idling time of diesel-powered construction equipment to two minutes.

v) All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449 of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") must meet Emissions and Performance Requirements one year in advance of any fleet deadlines. The project applicant shall provide written documentation that the fleet requirements have been met.

w) Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).

SCA AIR-3: Exposure to Air Pollution (Toxic Air Contaminants: Particulate Matter)
Prior to issuance of a demolition, grading, or building permit

A. Indoor Air Quality: In accordance with the recommendations of the California Air Resources Board (ARB) and the Bay Area Air Quality Management District, appropriate measures shall be incorporated into the project design in order to reduce the potential health risk due to exposure to diesel particulate matter to achieve an acceptable interior air quality level for sensitive receptors. The appropriate measures shall include **one** of the following methods:

1) The project applicant shall retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with the ARB and the Office of Environmental Health and Hazard Assessment requirements to determine the exposure of project residents/occupants/users to air polluters prior to issuance of a demolition, grading, or building permit. The HRA shall be submitted to the Planning and Zoning Division for review and approval. The applicant shall implement the approved HRA recommendations, if any. If the HRA concludes that the air quality risks from nearby sources are at or below acceptable levels, then additional measures are not required.

2) The applicant shall implement all of the following features that have been found to reduce the air quality risk to sensitive receptors and shall be included in the project construction plans. These features shall be submitted to the Planning and Zoning Division and the Building Services Division for review and approval prior to the issuance of a demolition, grading, or building permit and shall be maintained on an ongoing basis during operation of the project.

   a) Redesign the site layout to locate sensitive receptors as far as possible from any freeways, major roadways, or other sources of air pollution (e.g., loading docks, parking lots).

   b) Do not locate sensitive receptors near distribution center's entry and exit points.

   c) Incorporate tiered plantings of trees (redwood, deodar cedar, live oak, and/or oleander) to the maximum extent feasible between the sources of pollution and the sensitive receptors.

   d) Install, operate and maintain in good working order a central heating and ventilation (HV) system or other air take system in the building, or in each individual residential unit, that meets or exceeds an efficiency standard of MERV 13. The HV system shall include the following features: Installation of a high efficiency filter and/or carbon filter to filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85% supply filters shall be used.

   e) Retain a qualified HV consultant or HERS rater during the design phase of the project to locate the HV system based on exposure modeling from the pollutant sources.

   f) Install indoor air quality monitoring units in buildings.

   g) Project applicant shall maintain, repair and/or replace HV system on an ongoing and as needed basis or shall prepare an operation and maintenance manual for the HV system and the filter. The manual shall include the operating instructions and the maintenance and replacement schedule. This manual shall be included in the CC&Rs for residential projects and distributed to the building maintenance staff. In addition, the applicant shall prepare a separate homeowners manual. The manual shall contain the operating instructions and the maintenance and replacement schedule for the HV system and the filters.

B. Outdoor Air Quality: To the maximum extent practicable, individual and common exterior open space, including playgrounds, patios, and decks, shall either be shielded from the source of air pollution by buildings or otherwise buffered to further reduce air pollution for project occupants.

SCA TRANS-1: Parking and Transportation Demand Management
(Please refer to Section 3.16, Transportation/Traffic.)

3.3.3 UPDATED REGULATORY SETTING

Air quality within the Bay Area is addressed through the efforts of various federal, State, regional and local government agencies. The current regulatory setting, including the change in the regulatory setting since the preparation of the 2002 EIR, is summarized in this section.

3.3.3.1 Federal Air Quality Regulations

The federal government is continually updating and revising air quality regulations. The United States Environmental Protection Agency (U.S. EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships and certain locomotives.

As part of its enforcement responsibilities, the U.S. EPA requires each State with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

Title III of the federal Clean Air Act Amendments required the U.S. EPA to promulgate national emissions standards for certain Toxic Air Contaminants (TACs). At first, the U.S. EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable, generally referred to as Maximum Achievable Control Technology (MACT) standards. Then the U.S. EPA developed health risk-based emissions standards necessary to address risks remaining after implementation of MACT. Consequently, performance criteria were established to limit mobile source emissions of certain TACs, including benzene, formaldehyde, and 1,3-butadiene.

Notable changes in federal air quality regulations that would affect the build out of the 2012 Project include cleaner fuel standards (e.g., ultra low sulfur diesel), diesel engine emission limits, and more stringent ozone, SO_2 and $PM_{2.5}$ standards.

3.3.3.2 State Air Quality Regulations

Like the U.S. EPA, the California Air Resources Board (ARB) is continually updating and revising regulations. The California ARB, a part of the California EPA, is responsible for the coordination and administration of both federal and State air pollution control programs within California. In this capacity, California ARB conducts research, sets California Ambient Air Quality Standards, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The California ARB establishes emissions standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act (AB 2588). AB 1807 sets procedures for the designation of TACs and control measures for sources that emit particular TACs. If there is a safe emission threshold for a substance, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must require all feasible control measures to minimize emissions. To date, none of the TACs identified under AB 1807 has a safe threshold. AB 2588 requires all

facilities emitting TACs above specified levels to prepare emission inventories and risk assessments (the latter, if TAC emissions are found to be significant), and then to notify the public of the any significant risk and implement necessary reduction measures.

In 2000, the California ARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled engines and vehicles. The goal of the Plan is to reduce diesel PM emissions and the associated health risk by 75 percent in 2010 and 85 percent by 2020 relative to year 2000 levels. Since 2002, ARB adopted several TAC control measures and established more stringent emission standards for various on-road vehicles and off-road diesel equipment, especially equipment and fuel related to seaports, in an effort to meet its goals. Over time, the replacement of older vehicles is expected to result in a vehicle fleet that emits substantially less of the associated TACs (i.e., diesel particulate matter (DPM), benzene, and 1,3-butadiene). Adopted regulations are also expected to reduce formaldehyde emissions from cars and light-duty trucks.

In 2005, the California ARB released an Air Quality and Land Use Handbook[44] which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. The California ARB handbook recommends that planning agencies strongly consider the proximity of new developments to the sources listed in the Handbook when locating "sensitive" land uses such as homes, medical facilities, daycare centers, schools and playgrounds.

Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners and large gasoline service stations. Key recommendations in the Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day.
- Within 1,000 feet of a major service and maintenance rail yard.
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries.
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet).
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The Handbook specifically states that these recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

3.3.3.3 Regional Air Quality Regulations

The BAAQMD is the primary agency responsible for comprehensive air pollution control in the San Francisco Bay Area Air Basin, including Alameda County. To that end, BAAQMD, a regional agency, works directly with the Association of Bay Area Governments (ABAG), the Metropolitan

[44] California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

Transportation Commission (MTC), and local governments and cooperates actively with all federal and State government agencies. BAAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

In 2003, the California Legislature passed Senate Bill 656 (SB 656) to reduce public exposure to PM_{10} and $PM_{2.5}$. SB 656 required the California ARB, in consultation with local air districts, to develop and adopt, by January 1, 2005, a list of the most readily available, feasible, and cost-effective control measures to reduce PM_{10} and $PM_{2.5}$. In November 2005, BAAQMD adopted a Particulate Matter Implementation Strategy focusing on those measures most applicable and cost effective for the Bay Area.

BAAQMD is directly responsible for reducing emissions from stationary sources and for assuring that State controls on mobile sources are effectively implemented. It has responded to this requirement by preparing a sequence of Ozone Attainment Plans and Clean Air Plans that comply with the federal Clean Air Act and the California Clean Air Act to accommodate growth, reduce the pollutant levels in the Bay Area, meet federal and State ambient air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. The Ozone Attainment Plans are prepared to address the federal ozone standard and the Clean Air Plans are prepared to address the State ozone standard.

Although BAAQMD is responsible for regional air quality planning efforts, it does not have direct authority over plans formulated by other local agencies or governments, or over new development projects within the Bay Area.

Bay Area Clean Air Plan. The BAAQMD prepares plans to attain ambient air quality standards in the San Francisco Bay Area Air Basin. The BAAQMD prepares the Clean Air Plan (CAP) in coordination with the Metropolitan Transportation Commission and the Association of Bay Area Governments (ABAG). With respect to applicable air quality plans, the BAAQMD has adopted the *2010 Clean Air Plan* to address multiple pollutants in a single integrated plan. The purpose of the *2010 Clean Air Plan* is to:

1. Update the *Bay Area 2005 Ozone Strategy* in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone.
2. Provide control strategies to reduce ozone, particulate matter (PM, air toxics, and greenhouse gases in a single plan;
3. Review progress in improving air quality in recent years; and
4. Establish emission control measures to be adopted or implemented in the 2010 to 2012 timeframe.

BAAQMD CEQA Air Quality Guidelines and Thresholds. The most substantive changes in the air quality regulatory setting that have occurred since the 2002 EIR was certified involve the BAAQMD's update of the 1999 CEQA Air Quality Guidelines in 2011. In May of 2011, the BAAQMD adopted the latest version of its Thresholds of Significance for use in determining the significance of projects' environmental effects under CEQA (Thresholds), and published their latest version of *CEQA Guidelines* for consideration by lead agencies. The Thresholds lowered the previous

(1999) threshold of significance for annual emissions of Reactive Organic Gases (ROG), Nitrogen Oxides (NO_x) and particulate matter exhaust (PM_{10}), and set a standard for smaller particulates ($PM_{2.5}$) and fugitive dust. The 2011 *CEQA Guidelines* also include methodologies for evaluating risks and hazards for the siting of stationary sources and of sensitive receptors.[45]

A summary of the 1999 and 2011 thresholds of significance for the various pollutants is presented in Table 3-3.1, and the thresholds applied in this analysis are indicated in this table.

According to the 1999 BAAQMD thresholds of significance for criteria pollutants and precursors, the project would result in a significant impact if operational emissions were to exceed the following thresholds: more than 80 pounds per day of ROG, NO_x or PM_{10} (exhaust emissions only). The 1999 thresholds do not apply to construction emissions, although the 1999 BAAQMD Guidelines indicate that construction emissions are considered to be less than significant if BAAQMD-recommended dust and exhaust control measures are implemented. Although not applicable to this project, under the 2011 BAAQMD thresholds of significance for criteria pollutants and precursors, the project would result in a significant impact if construction-related or operational emissions were to exceed the following thresholds: more than 54 pounds per day of ROG, NO_x or $PM_{2.5}$ (exhaust emissions only). In addition, the 2011 BAAQMD Thresholds for criteria pollutant emissions associated with project operation include the following: more than 10 tons per year of ROG, NO_x, or $PM_{2.5}$ (exhaust emissions only), or 15 tons per year of PM_{10} (exhaust emissions only). The 1999 thresholds which apply to this project are 15 tons per year of ROG, NO_x or PM_{10}.

The BAAQMD 1999 and 2011 TAC thresholds are both an increased cancer risk of more than 10 in 1 million for a person with maximum exposure potential and increased non-cancer risk of 1.0 Hazard Index (chronic or acute). The 2011 BAAQMD Thresholds also include the following additional criterion: not to exceed the annual average ambient $PM_{2.5}$ concentration of 0.3 $\mu g/m^3$. The 2011 BAAQMD Thresholds apply to construction emissions. The 2011 Thresholds also require a cumulative evaluation when siting a new source or receptor, and BAAQMD cumulative TAC thresholds for both construction-related and operational emissions (considering all sources within a 1,000 foot radius) are an increased cancer risk of more than 100 in 1 million for a person with maximum exposure potential, increased non-cancer risk of 1.0 Hazard Index chronic or acute), and increase in annual average ambient $PM_{2.5}$ of more than 0.8 $\mu g/m^3$.

[45] As previously stated the City will be using the 1999 Thresholds to determine significant impacts but will utilize the 2011 Guidelines to provide information related to 2011 Thresholds which are not applicable here.

Table 3.3-1: Summary of BAAQMD CEQA Significance Thresholds Applied in This Analysis

	1999 Construction-Related Thresholds of Significance[1]	2011 Construction-Related Thresholds of Significance	1999 Operational Thresholds of Significance		2011 Operational Thresholds of Significance		Thresholds Applied in this Analysis
		Maximum Daily Emissions (pounds/day)	Maximum Daily Emissions (pounds/day)	Annual Emissions (tons/year)	Maximum Daily Emissions (pounds/day)	Annual Emissions (tons/year)	
Criteria Pollutants and Precursors (Regional)							
ROG	None	54	**80**	**15**	54	10	**Construction: 1999 Thresholds Operational: 1999 Thresholds**
NO_x	None	54	**80**	**15**	54	10	
PM_{10} (Particulate Matter Exhaust)	None	82	**80**	**15**	82	15	
$PM_{2.5}$ (Particulate Matter Exhaust)	None	54	**None**	**None**	54	10	
$PM_{10}/PM_{2.5}$ (Fugitive Dust)	None	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)		**Construction: None Operational: 1999/2011 Thresholds (Same)**
Risks and Hazards							
Siting a New Source or Receptor (Individual Project)	None	Cancer Risk: >10 in a million Non-Cancer Hazard Index: >1.0 $PM_{2.5}$ 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 Non-Cancer Hazard Index: >1.0 $PM_{2.5}$ Level: >0.3 $\mu g/m^3$ annual average		**Construction: 1999 Thresholds Operational: 1999 Cancer Thresholds**

Notes: While this Addendum evaluates the project's impact when compared to both the 1999 and 2011 BAAQMD CEQA significance thresholds, the thresholds applied in this analysis to determine impact significance are indicated in **bold** (1999 Thresholds).

[1] 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.

Source: BAAQMD, 1999 and BAAQM, 2011.

3.3.3.4 Port of Oakland Maritime Air Quality Policy, Maritime Air Quality Improvement Plan, and Comprehensive Truck Management Program

On March 18, 2008, the Port's Board of Port Commissioners approved a Maritime Air Quality Policy Statement. The air quality policy sets a goal of an 85 percent reduction from 2005 to 2020 in neighboring-community cancer health risks related to exposure to diesel particulate matter emissions from the Port's maritime operations through all practicable and feasible means. In April of 2009, the Port adopted its Maritime Air Quality Improvement Plan (MAQIP) which includes air quality goals and policies that cover all seaport-related development and operations at the Port. It specifically includes initiatives, programs and projects for achieving a reduction in DPM and criteria pollutants through targeted emission reductions and enforcement of regulations.

Subsequently on June 16, 2009, the Board adopted the Maritime Comprehensive Truck Management Program (CTMP), a MAQIP program. The CTMP was developed to comprehensively address security, air quality, business and operations, and community issues related to trucking operations at the Port's maritime facilities. CTMP measures to reduce diesel particulate matter emissions include enacting a ban on older, more-polluting trucks (2009), providing grants for diesel exhaust retrofits (2009-2010), and supporting initiatives to reduce idling (on-going).

3.3.3.5 City of Oakland General Plan and Municipal Code

Local jurisdictions, such as the City of Oakland, have the authority and responsibility to reduce air pollution through their decision-making authority and policy enforcement. Specially, the City is responsible for assessing the potential for and mitigating air quality issues that result from its land use decisions.

City of Oakland General Plan. The Open Space Conservation and Recreation (OSCAR) element of the City of Oakland's General Plan includes the following policies related to air quality:

- Policy CO-12.1: Promote land use patterns and densities which help improve regional air quality conditions. The City supports efforts of the responsible public agencies to reduce air pollution.
- Policy CO-12.4: Require that development projects be designed in a manner which reduces potential adverse air quality impacts.
- Policy CO-12.5: Use of best available control technology. Require new industry to use best available control technology to remove pollutants, including filtering, washing, or electrostatic treatment of emissions.
- Policy CO-12.6: Control of Dust Emissions. Require construction, demolition, and grading practices which minimize dust emissions.

City of Oakland Municipal Code. Pursuant to the City of Oakland Municipal Code, Title 15 Buildings and Construction, Chapter 15.36 Demolition Permits, 15.36.100 Dust Control Measures: 'Best Management Practices' shall be used throughout all phases of work, including suspension of work, to alleviate or prevent fugitive dust nuisance and the discharge of smoke or any other air contaminants into the atmosphere in such quantity as will violate any city or regional air pollution control rules, regulations, ordinances, or statutes. Water or dust palliatives or combinations of both shall be applied continuously and in sufficient quantity during the performance of work and at other times as required. Dust nuisance shall also be abated by cleaning and sweeping or other means as necessary. A dust control plan may be required as condition of permit issuance or at other times as may be deemed necessary to assure compliance with this section. Failure to control effectively or

abate fugitive dust nuisance or the discharge of smoke or any other air contaminants into the atmosphere may result in suspension or revocation of the permit, in addition to any other applicable enforcement actions or remedies.[46]

3.3.4 EXISTING CONDITIONS

The 2012 Project is located in the City of Oakland within the San Francisco Bay Area, a large shallow air basin ringed by hills that taper into a number of sheltered valleys around the perimeter. The air basin also comprises all of San Francisco, Contra Costa, Marin, Napa, San Mateo, and Santa Clara Counties, the southern half of Sonoma County, and the southwestern portion of Solano County.

Ambient air quality is influenced by climatological conditions, topography, and the quantity and type of pollutants released in an area. The major determinants of transport and dilution of a given pollutant are wind, atmospheric stability (presence or absence of inversions) and terrain. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955.

3.3.4.1 Existing Air Quality Conditions

Air pollutant emissions within the Bay Area are generated by stationary, area-wide and mobile sources. Stationary sources are usually associated with specific large manufacturing and industrial facilities. Examples include fossil-fuel power plants or large industrial boilers. Area sources emit small amounts of pollutants individually, but there are often many of them, and the sum of their emissions amounts to a large total quantity. Examples of area sources include residential and commercial water heaters, painting/coating operations, power lawn mower use, farming, and consumer products such as barbeque lighter fluid and hair spray. Mobile sources include on-road motor vehicles, aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by natural sources such as wild fires.

3.3.4.2 Criteria Pollutants

A description of the criteria air pollutants, their sources and their health effects is provided in this section.

Ozone. Ozone (smog) is a pungent, colorless gas that is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_x). Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. Ozone levels peak during the late spring, summer and early fall months.

Carbon Monoxide. CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where

[46] Oakland, City of, 2008. Ord. 12152 § 1, 1999.

it interferes with the transfer of oxygen to body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Nitrogen Oxides. Nitrogen dioxide (NO_2), a reddish-brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_x. NO_x is a primary component of the photo-chemical smog reaction. Nitrogen oxides also contribute to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 is an air quality pollutant of concern because it acts as a respiratory irritant, decreases lung function and may reduce resistance to infection.

Reactive Organic Gases. Reactive organic gases (ROG) are formed from combustion of fuels and evaporation of organic solvents. Consequently, ROG accumulates in the atmosphere much quicker during the winter when sunlight is limited and photochemical reactions are slower. ROG is an ozone precursor and a prime component of the photochemical reaction that forms ozone; however, ROG is not considered a criteria pollutant on its own.

Particulate Matter. Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are larger than 2.5 microns but smaller than 10 microns, or PM_{10}. $PM_{2.5}$ refers to fine suspended particulate matter with an aerodynamic diameter of 2.5 microns or less that is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM_{10} and $PM_{2.5}$. These small particles can be directly emitted into the atmosphere as by-products of fuel combustion, through abrasion, such as tire or brake lining wear, or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces, and can enter the human body through the lungs.

Sulfur Dioxide. Sulfur dioxide (SO_2) is a colorless, irritating gas formed primarily from incom-plete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Lead. Lead is a metal found in the natural environment, as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. In the past, mobile sources were the main contributor to ambient lead concentrations in the air. With the phase-out of lead in gasoline, other stationary sources, such as metal processing, are currently the primary source of lead emissions. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

3.3.4.3 Ambient Air Quality Standards

The federal and State governments have established ambient air quality standards. These standards are intended to protect the health of individuals most sensitive to a given pollutant's effects. The latest of these pollutant standards are listed in Table 3.3-2 below. The Bay Area's Attainment Status is shown in Table 3.3-3, while the known health effects are listed in Table 3.3-4.

Table 3.3-2: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a]		Federal Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e,i]	Secondary [c,f]	Method [g]
Ozone (O_3)	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	No Federal Standard	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3) (see footnote h)	Same as Primary Standard	Gas Phase Chemilumin-escence
	1-Hour	0.18 ppm (339 µg/m^3)		0.100 ppm (see footnote h)	None	
Lead [j]	Rolling 3-Month Average	–	Atomic Absorption	0.15 µg/m^3	Same as Primary Standard	High-Volume Sampler and Atomic Absorption
	30-day average	1.5 µg/m^3		–		
	Calendar Quarter	–		1.5 µg/m^3		
Sulfur Dioxide (SO_2)	24-Hour	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence		–	Spectrophoto-metry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m^3) (see footnote i)	
	1-Hour	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3) (see footnote i)	–	
Visibility-Reducing Particles	8-Hour	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride [j]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Table notes on next page.

[a] California standards for ozone, carbon monoxide (except in the Lake Tahoe air basin), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter – PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than for ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; parts per million (ppm) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] Any equivalent procedure which can be shown to the satisfaction of the California ARB to give equivalent results at or near the level of the air quality standard may be used.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

[h] To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the U.S. EPA standards are in units of parts per billion (ppb). California standards are in units of ppm. To directly compare the national standards to the California standards, the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

[i] On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. U.S. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older parasaniline methods until the new FRM has adequately permeated State monitoring networks. The U.S. EPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.30 ppm, effective August 23, 2010. The secondary SO_2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA. Note that the new standard is in units of ppb. California standards are in units of ppm. To directly compare the new primary national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[j] The California ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: California ARB, 2011.

Table 3.3-3: Bay Area Attainment Status

Pollutant	Averaging Time	California Standards [a]		National Standards [b]	
		Concentration	Attainment Status	Concentration[c]	Attainment Status
Ozone (O_3)	8-Hour	0.07 ppm (137 µg/m^3)	Nonattainment [h]	0.075 ppm	Nonattainment [d]
	1-Hour	0.09 ppm (180 µg/m^3)	Nonattainment	Not Applicable	Not Applicable [c]
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Attainment	9.0 ppm (10 mg/m^3)	Attainment [f]
	1-Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	Annual Mean	0.030 ppm (56 mg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Attainment
	1-Hour	0.18 ppm (338 µg/m^3)	Attainment	0.100 ppm	Unclassified
Suspended Particulate Matter (PM_{10})	Annual Mean	20 µg/m^3	Nonattainment [g]		
	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
Suspended Particulate Matter ($PM_{2.5}$)	Annual Mean	12 µg/m^3	Nonattainment [g]	15 µg/m^3	Attainment
	24-Hour	Not Applicable	Not Applicable	35 µg/m^3 [1]	Nonattainment
Sulfur Dioxide (SO_2)	Annual Mean	Not Applicable	Not Applicable	0.03 ppm (80 µg/m^3)	Attainment
	24-Hour	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	Attainment
	1-Hour	0.25 ppm (655 µg/m^3)	Attainment	Not Applicable	Not Applicable

Notes:
Lead (Pb) is not listed in the above table because it has been in attainment since the 1980s.
ppm = parts per million
mg/m^3 = milligrams per cubic meter
µg/m^3 = micrograms per cubic meter

[a] California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements are excluded that California ARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.

[b] National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.075 ppm (75 ppb) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 g/m3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 g/m3. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.

[c] National air quality standards are set by EPA at levels determined to be protective of public health with an adequate margin of safety.

[d] In June 2004, the Bay Area was designated as a marginal nonattainment area of the national 8- hour ozone standard. EPA lowered the national 8-hour ozone standard from 0.80 to 0.75 PPM (i.e. 75 ppb) effective May 27, 2008. EPA will issue final designations based upon the new 0.75 ppm ozone standard by March 2010.

[e] The national 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005.

[f] In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.

Table notes continued on next page.

[g] In June 2002, California ARB established new annual standards for $PM_{2.5}$ and PM_{10}.

[h] The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.

[i] EPA lowered the 24-hour $PM_{2.5}$ standard from 65 $\mu g/m^3$ to 35 $\mu g/m^3$ in 2006. EPA issued attainment status designations for the 35 $\mu g/m^3$ standard on December 22, 2008. EPA has designated the Bay Area as nonattainment for the 35 $\mu g/m^3$ PM2.5 standard. The EPA designation will be effective 90 days after publication of the regulation in the Federal Register. President Obama has ordered a freeze on all pending federal rules; therefore, the effective date of the designation is unknown at this time.

Source: Bay Area Air Quality Management District, 2011. Bay Area Attainment Status.

Table 3.3-4: Health Effects of Air Pollutants

Pollutant	Health Effects	Examples of Sources
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	• Reduced lung function • Aggravation of the effects of gaseous pollutants • Aggravation of respiratory and cardio respiratory diseases • Increased cough and chest discomfort • Soiling • Reduced visibility	• Stationary combustion of solid fuels • Construction activities • Industrial processes • Atmospheric chemical reactions
Ozone (O_3)	• Breathing difficulties • Lung damage	• Formed by chemical reactions of air pollutants in the presence of sunlight; common sources are motor vehicles, industries, and consumer products
Carbon Monoxide (CO)	• Chest pain in heart patients • Headaches, nausea • Reduced mental alertness • Death at very high levels	• Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Lead (Pb)	• Organ damage • Neurological and reproductive disorders • High blood pressure	• Metals processing • Fuel combustion • Waste disposal
Nitrogen Dioxide (NO_2)	• Lung damage	• See carbon monoxide sources
Toxic Air Contaminants	• Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders	• Cars and trucks, especially diesels • Industrial sources such as chrome platers • Neighborhood businesses such as dry cleaners and service stations • Building materials and products

Source: California ARB and EPA, 2012.

Measurements of ambient concentrations of the criteria pollutants are used by the U.S. EPA and California ARB to assess and classify the air quality of each regional air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and State standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment" for that pollutant. If the pollutant concentration exceeds the standard, the area is classified as a "nonattainment" area. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified."

BAAQMD monitors criteria air pollutant concentrations at a number of monitoring stations throughout the Bay Area. The air quality in the Bay Area, including Oakland, has generally improved over the past

20 years, as motor vehicles have become cleaner, agricultural and residential burning has been curtailed, and consumer products containing ROG have been reformulated or replaced.

The U.S. EPA and the California ARB use different standards for determining whether the Bay Area is an attainment area. Under national standards, the Bay Area was designated as a marginal nonattainment area for ozone in 2004. The regional is expected to also be considered as nonattainment when the U.S. EPA issues a final attainment designation based on the new 0.75 ppm 8-hour ozone standard, which is expected mid-2012. The Bay Area is designated nonattainment for $PM_{2.5}$. The Bay Area is in attainment or designated as unclassified for all other pollutants under national standards.

Under State standards, the Bay Area is designated as a nonattainment area for all standards for ozone, PM_{10}, and $PM_{2.5}$ and an attainment area for all other pollutants. Review of ozone and particulate matter data for the monitoring stations in West Oakland and Oakland – 9925 International Blvd. shows that only one standard was exceeded from 2008 through 2010 which was the State annual standard for PM_{10} in 2008. Air Quality monitoring data is reported in Table 3.3-5.

3.3.4.5 Toxic Air Contaminants

TACs are a regulatory designation that includes a diverse group of air pollutants which adversely affect human health. They are not fundamentally different from the criteria pollutants, but they have not had ambient air quality standards established for them for a variety of reasons (e.g., insufficient dose-response data, association with particular workplace exposures rather than general environmental exposure). The health effects of TACs can result from either acute or chronic exposure. Many types of cancer are associated with chronic TAC exposures, but TAC exposures can also cause other adverse health effects. Consequently, the BAAQMD has established both a cancer and a non-cancer health risk threshold to evaluate TAC emissions.

Significant sources of TACs in the environment include industrial processes, such as petroleum refining, chemical manufacturing, electric utilities, metal mining/refining and chrome plating; and commercial operations, gasoline stations, dry cleaners and buildings with boilers and/or emergency generators. Mobile sources are gasoline and diesel-powered vehicles of all types. The California ARB listed 10 compounds that pose the greatest known health risk in California. Based primarily on ambient air quality data, these are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and DPM.[47] Of these pollutants, only DPM could potentially be emitted from the Project in quantities greater than de minimis levels. Information on DPM is included below.

[47] California ARB, 2009. *The 2009 California Almanac of Emissions and Air Quality*. Sacramento, CA.

Table 3.3-5: Ambient Air Quality Data from the West Oakland Monitoring Station

Pollutant	Standard	2008	2009	2010
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		3.0	5.0	3.0
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.63[a]	1.96	1.69
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.086[a]	0.092[a]	0.040
Number of days exceeded:	State: > 0.09 ppm	0	0	0
Maximum 8-hour concentration (ppm)		0.064[a]	0.063[a]	0.035
Number of days exceeded:	State: > 0.07 ppm	0	0	0
	Federal: > 0.08 ppm	0	0	0
Coarse Particulates (PM_{10})				
Maximum 24-hour concentration ($\mu g/m^3$)		43.5[b]	33.5[b]	42.8[b]
Number of days exceeded:	State: > 50 $\mu g/m^3$	0	0	0
	Federal: > 150 $\mu g/m^3$	0	0	0
Annual arithmetic average concentration ($\mu g/m^3$)		22.4[b]	18.3[b]	ND
Exceeded for the year:	State: > 20 $\mu g/m^3$	Yes	No	ND
	Federal: > 50 $\mu g/m^3$	No	No	ND
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hour concentration ($\mu g/m^3$)		30.1[a]	27.9	35.2
Number of days exceeded:	Federal: > 35 $\mu g/m^3$	0	ND	ND
Annual arithmetic average concentration ($\mu g/m^3$)		9.5	ND	ND
Exceeded for the year:	State: > 12 $\mu g/m^3$	No	ND	ND
	Federal: > 15 $\mu g/m^3$	No	ND	ND
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.070[a]	0.057	0.069
Number of days exceeded:	State: > 0.25 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.015	0.016	0.016
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)				
Maximum 24-hour concentration (ppm)		0.005[b]	0.005	0.004
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0	ND	0
Exceeded for the year:	Federal: >0.030 ppm	No	ND	No

[a] Monitoring results reported from the 9925 International Blvd in Oakland
[b] Monitoring results reported from 6th Street in Berkeley
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
ND = No data. There was insufficient (or no) data to determine the value.

Source: California ARB, 2012.

Diesel Particulate Matter. DPM is found in engine exhaust and consists of a mixture of gases and fine particles (smoke or soot) that can penetrate deeply into the lungs where it can contribute to a range of health problems. In 1998, the California ARB identified particulate matter from diesel-

powered engines as a TAC based on its potential to cause cancer and other adverse health effects.[48] Diesel exhaust is a complex mixture that includes hundreds of individual constituents and is identified by the State of California as a known carcinogen.[49] However, under California regulatory guidelines, DPM is used as a surrogate measure of exposure for the mixture of chemicals that make up diesel exhaust as a whole.[50]

Based on receptor modeling techniques, the California ARB estimated the background DPM health risk in the Bay Area in 2000 to be approximately 500 cancer cases per million people. This reflects a drop of approximately 36 percent from estimates for 1990.[51] In 2000, the California ARB approved a new regulation for existing heavy duty diesel vehicles that requires retrofitting and replacement of vehicles or their engines over time such that by 2023 all vehicles must have a 2010 model year engine or equivalent. This regulation is anticipated to result in an 85 percent decrease in statewide diesel health risk in 2020 from the 2000 risk levels.[52]

California Air Resources Board West Oakland Health Risk Assessment. In March 2008, the California ARB working in cooperation with the Port of Oakland, Union Pacific (UP) Railroad, and the BAAQMD completed a study designed to help understand the potential health impacts from DPM emissions on residents of the West Oakland community. Key findings of the California ARB report were:

- DPM ambient concentrations in West Oakland are estimated to be nearly three times the background DPM concentrations averaged over the entire Bay Area.
- The estimated lifetime potential cancer risk for residents of West Oakland from exposure to all DPM emissions included in the study is estimated to be about 1,200 excess cancers per million. This estimate assumes residents are exposed to the estimated 2005 outdoor DPM levels continuously for 70 years. By way of comparison, the corresponding background risk from DPM emissions over the entire Bay Area is estimated to be 480 excess cancer cases per million, the corresponding background risk from emissions of all air toxics species in the Bay Area is 660 per million and the expected cancer rate from all causes, including smoking, is about 200,000 to 250,000 per million, according to the California ARB study.
- Of the total West Oakland DPM exposure risk noted above (1,186 per million from all sources), emissions from Port seaport operations contribute to 16 percent (192 per million), Union Pacific railyard sources contribute 4 percent (43 per million) and other sources in and around West Oakland contribute to the remaining 80 percent (951 per million).

At the time of the 2008 report, California ARB projections of future DPM emissions indicate that emissions and associated health risk would be reduced in West Oakland by about 80 percent by 2015, reflecting reductions achieved by State and federal regulations.

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[48] California ARB, 1998. Initial Statement of Reasons for Rulemaking. Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant. June.

[49] California Environmental Protection Agency, 1998. *Findings of the Scientific Review Panel on The Report on Diesel Exhaust*, as adopted at the Panel's April 22, 1998 meeting. Office of Environmental Health Hazard Assessment.

[50] Ibid.

[51] California ARB, 2009, op. cit.

[52] California ARB, 2000. Stationary Source Division, Mobile Source Control Division. October.

BAAQMD CARE Program. Under the Community Air Risk Evaluation (CARE) program, BAAQMD began identifying areas with high TAC emissions and sensitive populations that could be affected by such emissions, and using this information to establish policies and programs to reduce TAC emissions and exposures. During Phase I of CARE, BAAQMD developed a preliminary Bay-Area-wide TAC emissions inventory (for the Year 2000) and compiled demographic and health-statistics data to identify sensitive populations. Five TACs (DPM, 1,3-butadiene, benzene, hexavalent chromium, and formaldehyde) were estimated to be responsible for about 97 percent of the Bay Area's cumulative cancer risk, and DPM alone accounts for about 80 percent of this cancer risk. Major sources of DPM include on-road and off-road heavy-duty diesel trucks and construction equipment. The highest DPM emissions occur in the urban core areas of eastern San Francisco, western Alameda, and northwestern Santa Clara Counties.

3.3.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

Based upon the 1999 BAAQMD Thresholds, the 2012 Project would have a significant impact on the environment if it would:

Project Impacts

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) Result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations;

e) Frequently create substantial objectionable odors affecting a substantial number of people;

f) Contribute to CO concentrations exceeding the State AAQS of 9 ppm averaged over 8 hours and 20 ppm for 1 hour;

g) Result in total emissions of ROG, NOx, or PM10 of 15 tons per year or greater, or 80 pounds per day or greater;

h) Result in potential to expose persons to substantial levels of Toxic Air Contaminants (TAC), such that the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million;

i) Result in ground level concentrations of non-carcinogenic TACs such that the Hazard Index would be greater than for MEI; or

j) Result in a substantial increase in diesel emissions

Cumulative Impacts

k) Result in any individually significant impact; or

l) Result in a fundamental conflict with the local general plan, when the general plan is consistent with the regional air quality plan. When the general plan fundamentally conflicts with the

regional air quality plan, then if the contribution of the proposed project is cumulatively considerable when analyzed the impact to air quality should be considered significant.

m) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

n) Result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

These criteria are discussed below.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

The applicable air quality plan in 2002 was the BAAQMD's 2000 Clean Air Plan. Chapter 4, Consistency with Plans and Policies, of the 2002 EIR, briefly describes the Clean Air Plan, but does not directly state consistency with the CAP. This section does note that the 2002 Redevelopment Plan would not only be consistent with, but directly and positively achieve, the intent of several plans and policies, including the Oakland General Plan Land Use and Transportation Element and the Open Space, Conservation and Recreation Element.

The current air quality plan is the BAAQMD's 2010 Clean Air Plan, which was adopted on September 15, 2010, and is an update to the 2000 Clean Air Plan. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines a control strategy to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the project does the following: 1) supports the goals of the Clean Air Plan; 2) includes applicable control measures from the Clean Air Plan; and 3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

1) Does the project support the goals of the Clean Air Plan?

The primary goals of the 2010 Bay Area Clean Air Plan are to: attain air quality standards; reduce population exposure to air pollutants and protect public health in the Bay Area; and reduce greenhouse gas emissions and protect the climate.

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 would have an adverse impact on the region's attainment of air quality standards. The health and hazards thresholds were established to help protect public health.

As discussed in the remainder of this section, consistent with impacts identified in 2002, the Project would result in significant construction and operational emission impacts and would increase the exposure of toxic air contaminants to nearby residences which would not support the goals of the

Clean Air Plan. However, overall the 2012 Project impacts would be less than those identified in the 2002 EIR.

2) Does the project include applicable control measures from the Clean Air Plan?

The control strategies of the 2010 Clean Air Plan include measures in the traditional categories of stationary source measures, mobile source measures, and transportation control measures. This latest Clean Air Plan identifies two new subcategories of control measures, including land use and local impact measures and energy and climate measures. Stationary source measures are not specifically applicable to the proposed project. The project's consistency with other measures in the 2010 Clean Air Plan is discussed below.

Transportation and Mobile Source Control Measures. The transportation control measures in the 2010 Clean Air Plan are designed to reduce emissions from motor vehicles by reducing vehicle trips and vehicle miles traveled (VMT) in addition to vehicle idling and traffic congestion. The 2012 Project would implement SCA AIR-2 which would require a transportation demand program that would reduce VMT associated with the project. The 2012 Project would not conflict with any of the Land Use and Local Impact Measures of the Bay Area 2010 Clean Air Plan

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

Energy Measures. The BAAQMD's 2010 Clean Air Plan also includes Energy and Climate Control Measures (ECM), which are designed to reduce ambient concentrations of criteria pollutants and reduce emissions of CO_2. Implementation of these measures is intended to promote energy conservation and efficiency in buildings throughout the community, promote renewable forms of energy production, reduce the "urban heat island" effect by increasing reflectivity of roofs and parking lots, and promote the planting of (low-VOC-emitting) trees to reduce biogenic emissions, lower air temperatures, provide shade, and absorb air pollutants.

ECM-2, Renewable Energy, is intended to promote the incorporation of renewable energy sources into new development and foster innovative renewable energy projects through the provision of incentives to reduce energy consumption. This measure is not specifically applicable to the proposed project; however, the project would incorporate the use of photovoltaic panels for solar energy for approximately 20 percent of its energy use. Therefore, the project would not conflict with ECM-2.

3) Would the project disrupt or hinder implementation of any control measures from the Clean Air Plan?

As described above, the 2012 Project would implement applicable control measures and would therefore not disrupt or hinder implementation of any control measure from the Clean Air Plan.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, and 4.4-5

2012 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5 and 4.4-6, supplemented with SCA AIR-2

Significance After Implementation: Significant and Unavoidable (No New Impact and no substantial increase in severity of a previously identified significant impact)

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

As shown in Table 3.3-3 above, the project is in a nonattainment area for ozone and particulate matter. Construction and operation of the project would result in the release of emissions that could contribute to these existing air quality violations. According to the BAAQMD 1999 Thresholds, a project that would result in emissions of ROG, NOx, or PM_{10} of 15 tons per year or greater, or 80 pounds per day or greater have the potential to contribute the substantially to existing or projected air quality violations.

Construction Emissions

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by demolition, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Site preparation and project construction would involve demolition of the existing structures on the project site, clearing, Deep Dynamic Compaction (DDC) activities, import and surcharge of soil, grading, and building activities. Construction-related effects on air quality from the 2012 Project would be greatest during the site preparation phase because most engine emissions are associated with the DDC and the handling, and transport of soils on the site. If not properly controlled, these activities would temporarily generate PM_{10}, $PM_{2.5}$, and to a lesser extent, emissions of CO, SO_2, NO_x, and VOCs. Sources of fugitive dust would include disturbed soils at the construction sites and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction sites.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emis-

sions (PM_{10}). With the implementation of standard construction measures such as frequent watering (e.g., two times per day at a minimum), fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, VOCs and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be limited to the construction period and the areas immediately surrounding the construction sites.

Construction emission estimates were not quantified as part of the 2002 EIR as it was not required at that time. For comparison purposes, construction emissions were estimated for the 2002 Project using emission rates roughly consistent with the development time frame that would have been assumed in 2002 and activity levels that would occur with the 2012 Project, the results of which are shown in Table 3.3-6.

Construction operations from the 2012 Project would be expected to be in general, similar to those which would have occurred under construction of the 2002 Project. Construction emissions for the 2012 Project are shown in Table 3.3-7. Construction equipment exhaust emissions have been drastically reduced since the California ARB approved a comprehensive Diesel Risk Reduction Plan in September 2000 which applies to all off-road construction vehicles resulting in substantially cleaner engines through more stringent emission standards.

Table 3.3-6: 2002 Project Construction Emissions (pounds/day)

Project Construction	ROG[a]	CO	NO_x	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$	Total $PM_{2.5}$[b]	Exhaust PM_{10}	Fugitive Dust PM_{10}	Total PM_{10}[b]
Average Daily On-Site Emissions[c]	54.0	179.3	438.1	20.2	NA	20.5	22.0	NA	22.8
Average Daily Off-Site Emissions[c]	12.2	66.4	178.8	5.7	NA	6.1	6.1	NA	7.0
Total Emissions	66.2	245.7	616.9	25.9	NA	26.6	28.1	NA	29.8
2002 Thresholds	BMP	BMP	BMP	BMP	BMP	BMP	BMP	BMP	BMP
2011 Thresholds	54.0	NA	54.0	54.0	BMP	NA	82.0	BMP	NA

[a] ROG emissions include exhaust ROG from all sources and evaporative running loss ROG from employee commute vehicles (modeled as light-duty cars)

[b] Total PM_{10} and $PM_{2.5}$ include exhaust PM from all sources and tire wear and brake wear from on-road vehicles; road dust and fugitive dust are not evaluated and not included in the total

[c] Average daily emissions are defined as total emissions over entire period of construction (2002-2010) divided by the number of days within this period

BMP = Best Management Practices

Source: ENVIRON, 2012.

Table 3.3-7: 2012 Project Construction Emissions (Pounds/Day)

Project Construction	ROG [a]	CO	NO_x	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$	Total $PM_{2.5}$ [b]	Exhaust PM_{10}	Fugitive Dust PM_{10}	Total PM_{10} [b]
Average Daily On-site Emissions [c]	15.1	75.3	198.6	5.3	NA	5.6	5.7	NA	6.6
Average Daily Off-site Emissions [c]	8.8	31.8	100.2	3.6	NA	3.9	3.7	NA	4.6
Total Emissions	23.9	107.1	298.8	8.9	NA	9.5	9.4	NA	11.2
2002 Thresholds	BMP	BMP	BMP	BMP	BMP	BMP	BMP	BMP	BMP
2011 Thresholds	54.0	NA	54.0	54.0	BMP	NA	82.0	BMP	NA

[a] ROG emissions include exhaust ROG from all sources and evaporative running loss ROG from employee commute vehicles (modeled as light-duty cars)

[b] Total PM_{10} and $PM_{2.5}$ include exhaust PM from all sources and tire wear and brake wear from on-road vehicles; road dust and fugitive dust are not evaluated and not included in the total

[c] Average daily emissions are defined as total emissions over entire period of construction (July 2012 through December 2019) divided by the number of days within this period

BMP = Best Management Practices

Source: ENVIRON, 2012

The 1999 BAAQMD Guidelines do not contain quantitative construction thresholds. Under the 1999 Guidelines, BAAQMD considers construction-related dust emissions from all construction projects to be potentially significant, but mitigated to a less-than-significant level if BAAQMD-recommended dust controls are implemented. Implementation of the City's SCA AIR-2, which is consistent with BAAQMD currently recommended construction measures, are more stringent than those recommended in the 1999 Guidelines and would further reduce construction emissions by minimizing idling time of equipment. Additionally, all construction equipment, diesel trucks, and generators would be equipped with Best Available Control Technology for emission reductions of NO_x and PM.

Therefore, implementation of the project would not result in a significant impact related to construction criteria pollutant emissions.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.4-1 and 4.4-2

2012 Mitigation: SCA AIR-1 and SCA AIR-2, which supersede 2002 EIR Mitigation Measures 4.4-1 and 4.4-2

Significance After Implementation: Less Than Significant (No New Impact)

Operation Emissions

Operation of the 2012 Project would include a Trade and Logistics Center that combines a Port of Oakland development program and a City of Oakland development program for the construction of new buildings (such as warehouse and distribution facilities) primarily to support cargo logistics uses. The 2012 Project would also implement the infrastructure necessary to support the project including a

new rail yard, roadway and railroad improvements as well as water, sewer, storm drainage, telecommunications, security, gas, electrical and other utility improvements.

The 2012 Project would not result in any new or more significant operational air quality impacts. As discussed in the 2002 EIR, in addition to passenger and delivery trucks, the proposed project would generate operational emissions from maritime and rail operations, transport trucks, and space and water heating. The 2002 EIR quantified project emissions as shown in Table 3.3-8. The 2012 Project would generate less ROG, NO_x, PM_{10} and $PM_{2.5}$ emissions than identified in 2002 as shown in Table 3.3-8.

Table 3.3-8: 2002 EIR and 2012 Project Regional Emissions in Tons Per Year

	Reactive Organic Gases	Nitrogen Oxides	PM_{10}	$PM_{2.5}$
2002 EIR Operational Emissions(tons/year)[a]				
Port Development Area				
Trains	2	29	1	1
Railyard Equipment	6	55	3	3
Transport Trucks[b]	5	32	1	1
Cars/Delivery Trucks	17	10	1	1
Gateway Development Area				
Cars/Delivery Trucks	92	51	8	8
Transport Trucks	0	2	0	0
Less 1995 Alternative Baseline Emissions[c]	21	12	2	2
Total 2002 Project Emissions	**101**	**167**	**12**	**12**
Proposed 2012 Project (Variant A – Working Waterfront) Operational Emissions (tons/year)				
Marine Cargo Handling Equipment	0.0	0.4	0.0	0.0
Ships				
Hotelling	0.0	1.0	0.0	0.0
Maneuvering	0.3	2.1	0.0	0.0
Cruising	1.6	33.9	0.5	0.5
Assist Tugs				
Assisting	0.1	2.2	0.0	0.0
Transiting	0.1	1.6	0.0	0.0
Trains (Linehaul and Switchers)	2.2	36.0	0.7	0.6
Transport Trucks	8.9	72.1	1.0	0.6
Passenger Vehicles	4.7	8.7	0.5	0.4
Recyclers	0.0	0.5	0.1	0.1
Operational Emissions Subtotal[d]	18.1	161.1	2.8	2.7
Less 1995 Alternative Baseline Emissions	21	12	2	2
Total Operational Emissions[e]	**-3.1**	**146.5**	**0.8**	**0.7**
1999 BAAQMD Significance Threshold	**10**	**10**	**10**	**NA**
2011 BAAQMD Significance Threshold	10	10	15	10
Proposed 2012 Project (Variant B – Research and Development) Operational Emissions (tons/year)				
Trains (Linehaul and Switchers)	2.2	36.0	0.7	0.6
Transport Trucks	8.9	72.1	1.0	1.5
Passenger Vehicles	5.2	9.4	0.5	0.4
Recyclers	0.0	0.5	0.1	0.1
Operational Emissions Subtotal	16.3	118	2.3	2.6
Less 1995 Alternative Baseline Emissions[c]	21	12	2	2
Total Operational Emissions[e]	**-4.7**	**106**	**0.3**	**0.6**
1999 BAAQMD Significance Threshold	**10**	**10**	**10**	**NA**
2011 BAAQMD Significance Threshold	10	10	15	10

Table notes on next page.

[a] Emissions are based on the calculations prepared for the 2002 EIR prepared by URS for the geographic area representing the proposed project.

[b] Transport truck emissions include only the distance traveled on-site

[c] 1995 Alternative Baseline Emissions are for the disposal and reuse of the OARB calculated by Corps in 2001.

[d] Operational emissions do not include refrigerated generator sets.

[e] Alternative Baseline Emissions were calculated in 2001 using emission factors from mobile sources current at the time. 2012 Project emissions were calculated for opening year of the Project (2020) using current emission factors which account for emission reductions due to increased regulatory requirements for mobile sources. Therefore, as shown in this table, total Project operational emissions result in no net increase in reactive organic gas emissions.

Source: ENVIRON, 2012 and LSA Associates, Inc.

Implementation of SCA AIR-2 would contribute to a reduction in operational emissions through the development of a TDM plan containing strategies to reduce on-site parking demand and single occupant vehicle travel.

However, even with implementation of the 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5 and 4.4-6, consistent with the findings of the 2002 EIR, daily and annual emissions of NO_x would be significant and unavoidable which would contribute substantially to the existing and any future ozone air quality violations. Impacts related to ROG (when the 1995 alternative baseline adjustment is accounted for) and PM_{10} would be reduced to a less than significant level with implementation of the 2012 Project. However, all criteria pollutants are lower with any variant of the 2012 Project as compared to the 2002 Project.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, and 4.4-5

2012 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5 and 4.4-6, supplemented with SCA AIR-2

Significance After Implementation: Significant and Unavoidable (No New Impact and no substantial increase in severity of a previously identified significant impact)

c) Would the project result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

According to the 1999 and 2011 guidance from the BAAQMD, 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 impacts. Therefore, if daily average or annual emissions of operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the 2012 Project would result in a cumulatively significant impact.

As identified in the 2002 EIR, the proposed project would exceed the significance thresholds at the individual level and therefore, the proposed project would also contribute to any cumulatively significant air pollution impact. Implementation of the mitigation measures outlined in the 2002 EIR and implementation of the City's Standard Conditions of Approval would reduce these impacts; however, as identified in the 2002 EIR, cumulative impacts would remain significant and unavoidable.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, and 4.4-5

2012 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5, 4.4-6 and 5.4-1, supplemented with SCA AIR-2

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

As identified in the 2002 EIR, construction of the 2002 Project would result in a substantial increase in diesel emissions which would expose sensitive receptors to substantial levels of TACs. The 2012 Project would not result in any new or more significant health risk impacts than were identified in the 2002 EIR. The 2012 Project would be subject to today's more stringent on-road and off-road diesel equipment emission regulations which reduce health risk impacts substantially over those that would have occurred in 2002. Nevertheless, this impact would remain significant and unavoidable.

The 2002 EIR concluded that, even after mitigation, the operational health risk impact of the 2002 Project due to exposure of sensitive receptors to substantial concentrations of TACs would be significant and unavoidable. The operational health risk assessment prepared in the 2002 Final EIR estimated excess lifetime cancer risks of 80 in one million at the project boundary and 10 in one million in West Oakland.

Results of the 2012 Project operational health risk assessment are discussed under criterion h) below. Results indicate that the maximum excess lifetime cancer risk estimated for the proposed project would be less than the maximum risk levels for the 2002 Project under both 2002 analysis standards and 2012 analysis standards at most receptor locations. The 2012 Project would result in lower pollutant concentrations when compared with the impacts of the 2002 Project. However, even with implementation of mitigation measures and the City's Standard Conditions of Approval, implementation of the 2012 Project would have a significant and unavoidable impact related to the exposure of sensitive receptors to substantial toxic air contaminants.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: EIR Mitigation Measures 4.4-2, 4.4-3, 4.4-4, 4.4-5 and 4.4-6

2012 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5 and 4.4-6, supplemented with SCA AIR-1, SCA AIR-2, and SCA AIR-3, which supersede 2002 EIR Mitigation Measures 4.4-1 and 4.4-2.

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

e) Would the project frequently create substantial objectionable odors affecting a substantial number of people?

The 2002 EIR identified the proximity of the East Bay Municipal Utility District's Main Waste Water Treatment Plan (MWWTP) to the OARB sub-district as a potentially significant odor impact for future employees of the project site. However, the EIR concluded that this impact would be less than significant. Consistent with the 2002 EIR, exposure to odors associated with the project are not expected to be significant. Additionally, current City guidelines do not consider employees as odor sensitive receptors.

Diesel exhaust odors associated with the project would be expected to dissipate quickly and therefore, consistent with the 2002 EIR, odors associated with the 2012 Project would not be significant.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

f) Would the project contribute to CO concentrations exceeding the State AAQS of 9 ppm averaged over 8 hours and 20 ppm for 1 hour?

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, the BAAQMD revised their conservative CO screening methodology which provides an indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD's 2011 *CEQA Guidelines*, a proposed project would result in a less-than-significant impact to localized CO concentrations 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 where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

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 Thresholds.

The project site is not located in an area where vertical or horizontal mixing is substantially limited. Traffic volumes on roadways in the vicinity of the project site are less than 44,000 vehicles per hour and the 2012 Project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour and would not result in localized CO concentrations that exceed State or federal standards. The 2012 Project would however cause the level of service to significantly deteriorate even with mitigation at one intersection and therefore would conservatively conflict with the local congestion management plan even though the overall CMP network operations improve with the 2002 Project as compared to 2002.

The project would result in an unavoidable deterioration of LOS standards at one intersection in the project vicinity, therefore additional analysis beyond the screening methodology is required. A CO hot-spot analysis using CALINE4 was conducted for this intersection to determine if air quality standards would be exceeded, the results of which are shown in Table 3.3-9.

Table 3.3-9: CO Concentrations at Study Area Intersections with the Project

Intersection	1-Hour CO Concentration	8-Hour CO Concentration	Exceeds State Standards?	
			1-Hour (20 ppm)	8-Hour (9 ppm)
Year 2020: Frontage and W. Grand	4.3	3.0	No	No
Year 2035: Frontage and W. Grand	4.6	3.3	No	No

Source: LSA Associates, Inc., 2012

As shown in Table 3.3-9 above, the study intersection that significantly deteriorates with implementation of the project would not exceed State or federal CO standards. Therefore, the project would not contribute to CO concentrations exceeding the State AAQS of 9 ppm averaged over 8 hours and 20 ppm for 1 hour.

2002 Impact: Significant and Unavoidable

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.4-4

2012 Mitigation: None Required

Significance After Implementation: Less Than Significant (No New Impact)

g) Would the project result in total emissions of ROG, NOx, or PM10 of 15 tons per year or greater, or 80 pounds per day or greater?*[For informational purposes, the 2011 update to this threshold is: Would project operation result in average daily emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NO_x, or $PM_{2.5}$ or 15 pounds per day of PM_{10}?]*

As described in Section b) above, results of operational air emissions modeling indicate as shown in Table 3.3-8, that the 2012 Project would result in total emissions of NO_x greater than 10 tons per year. Therefore, consistent with the findings of the 2002 EIR, even with implementation of the 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5 and 4.4-6, daily and annual emissions of NO_x would be significant and unavoidable. Impacts related to ROG (when the 1995 alternative baseline adjustment is accounted for) and PM_{10} would be reduced to a less than significant level with implementation of the 2012 Project.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, and 4.4-5

2012 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5 and 4.4-6, supplemented with SCA AIR-2

Significance After Implementation: Significant and Unavoidable (No New Impact and no substantial increase in severity of a previously identified significant impact)

h) Would the project result in potential to expose persons to substantial levels of Toxic Air Contaminants (TAC), such that the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million? *[For informational purposes, the 2011 update to this threshold is: Additionally, would the project cumulatively result in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ or greater than 0.8 micrograms per cubic meter?]*

An evaluation of the 2012 Project was conducted by ENVIRON to determine the potential health risks (cancer and non-cancer) associated with TACs produced from the construction and operation of the 2012 Project. Additional details related to this analysis are provided in Appendix A.

At the time of the 2002 EIR, the BAAQMD had not identified a numeric TAC risk threshold for construction emissions; however, the 2002 EIR did identify construction diesel emissions as significant and unavoidable.

Using emission rates from the 2002 Project and 2012 Project construction operations, air dispersion modeling was conducted to determine the health risk associated with construction of both the 2002 and 2012 Projects. Results indicating the maximum health effects from all sources associated with construction are shown in Table 3.3-10.

Table 3.3-10: Project Construction Health Risk Assessment Results

	Population	Excess Lifetime Cancer Risk in a million	Chronic Health Index	Acute Health Index	Annual $PM_{2.5}$ Concentration $\mu g/m^3$
2002 Project	Resident Child	107	0.077	12	0.35
	Resident Adult	12			
2012 Project	Resident Child	42	0.030	4	0.14
	Resident Adult	4			
1999 BAAQMD Threshold		**None**	**None**	**None**	**None**
2011 BAAQMD Threshold		**10**	**1**	**1**	**0.3**

Source: ENVIRON, 2012.

As identified in the 2002 EIR and as confirmed in this recreation of the 2002 analysis, construction of the 2002 Project would result in a substantial increase in diesel emissions which would expose persons to substantial levels of TACs. The 2012 Project would not result in any new or more significant health risk impacts than were identified in the 2002 EIR. As shown in Table 3.3-10, construction of the 2012 Project would result in substantially lower risk than would have been anticipated under the 2002 Project. The 2012 Project would be subject to today's more stringent on-road and off-road diesel equipment emission regulations which reduce health risk impacts substantially over those that would have occurred in 2002. Nevertheless, this impact would remain significant and unavoidable.

Project Operation Results. The 2002 EIR concluded that, even after mitigation, the operational health risk impact of the 2002 Project would be significant and unavoidable. The operational health risk assessment prepared in the 2002 Final EIR estimated excess lifetime cancer risks of 80 in one million at the project boundary and 10 in one million in West Oakland.

Results of the 2012 Project operational health risk assessment are shown in Table 3.3-11. As explained in the methodology section below, the assessment was conducted for two scenarios using both the methodology standard to the 2002 project analysis and the 2011 BAAQMD guidance documents. Results indicate that the maximum excess lifetime cancer risk estimated for the proposed project would be less than the maximum risk levels for the 2002 project under both 2002 analysis standards and 2012 analysis standards. At most receptor locations, incremental model results of the 2012 Project are equal to or less than the results of the 2002 Project. However, this is not the case at all modeled locations.

Table 3.3-11: Operational Health Risk Assessment Results (Cancer Cases in 1 Million)

	2002 Project	2012 Project	Increment
Maximum Cancer Risk 2002 Approach	84	31	-53
Maximum Cancer Risk 2012 Approach	278	96	-182
1999 BAAQMD Thresholds	**10**	**10**	
2011 BAAQMD Thresholds	**10**	**10**	

Source: ENVIRON, 2012.

As shown in Table 3.3-11 above, the 2012 Project at the MEI would have a lower estimated excess lifetime cancer risk when compared with the impacts of the 2002 Project. However, even with implementation of mitigation measures and the City's Standard Conditions of Approval,

implementation of the 2012 Project would have a significant and unavoidable impact related to the exposure of sensitive receptors to substantial toxic air contaminants.

Estimated excess lifetime cancer risks for the 2002 and 2012 Projects were compared by rank ordering the off-site sensitive receptor locations according to the calculated 2002 Project cancer risk and comparing them to the 2012 Project cancer risk at the same location as shown in Figure 3.3-1. For purposes of this comparison, cancer risks from the 2012 Project were calculated exclusive of refrigerated cargo containers generator sets (reefer gensets) emissions since reefers were not included in 2002 Project cancer risk calculations. Reefers contribute between 10 percent (at locations further from the Project in West Oakland and Emeryville) and 30 percent (at locations close to the Project in West Oakland) to total 2012 Project cancer risk and reefer genset activity is expected to be in approximately the same location for the 2012 Project as the 2002 Project. Estimated excess lifetime cancer risks from the 2012 Project are substantially less than estimated risks from the 2002 Project at locations with the highest calculated risks. This means that the 2012 Project reduces risks where the 2002 Project had its greatest impacts. Where the 2012 Project estimated excess lifetime cancer risk does exceed the 2002 Project risk, all increases are less than 10 in a million, which corresponds to the BAAQMD's cancer risk significance threshold. Furthermore, as can be seen in Figure 3.3-1, those instances where risks from the 2012 Project exceed cancer risks from the 2002 Project occur at locations where risks from both projects are close to 10 in a million.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: EIR Mitigation Measures 4.4-2, 4.4-3, 4.4-4, 4.4-5 and 4.4-6

2012 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5 and 4.4-6, supplemented with SCA AIR-1, SCA AIR-2, and SCA AIR-3

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

Methodology

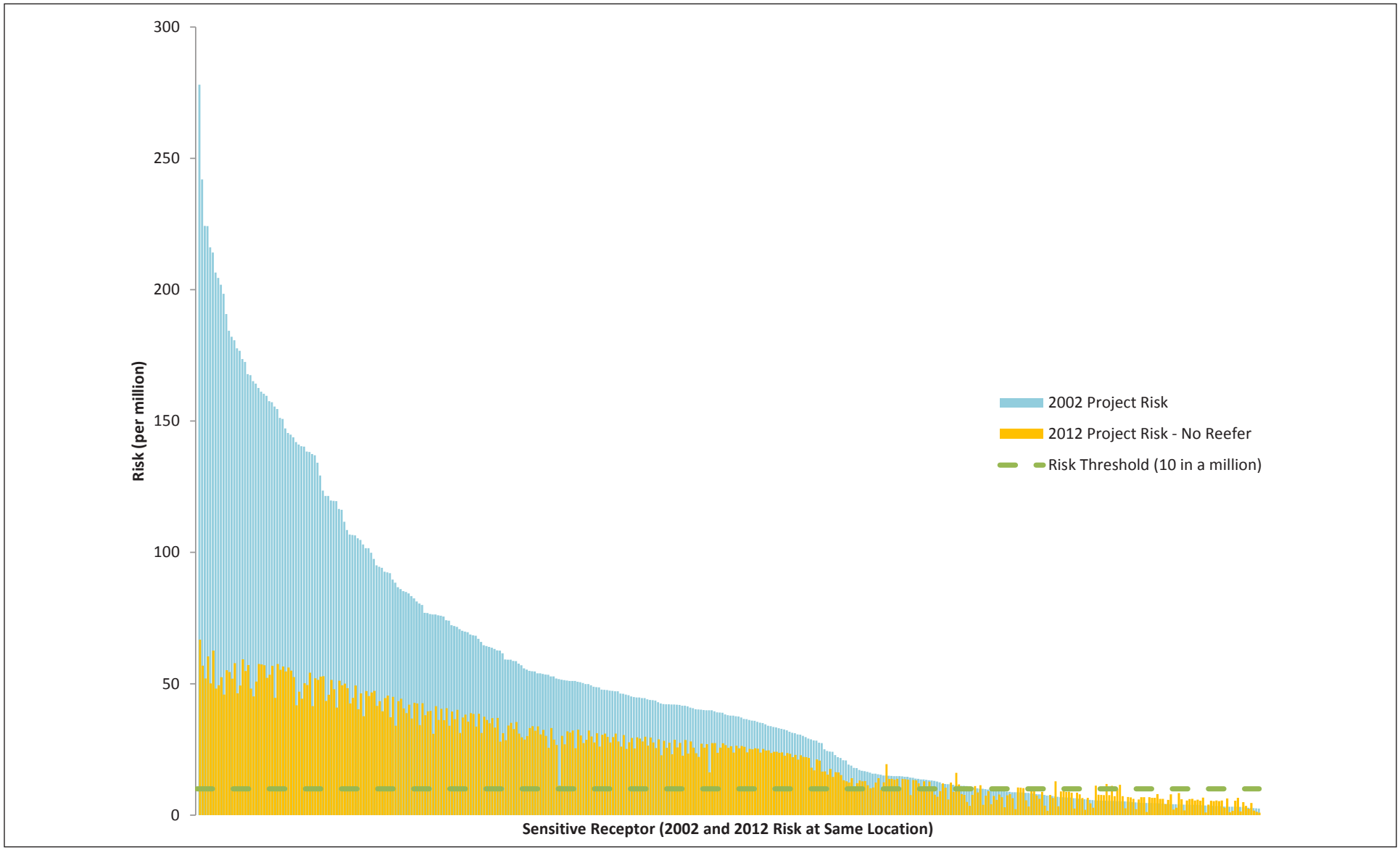
The methodology used to determine the conclusions presented above are described below.

Emission Estimates. To determine the increased cancer risk associated with construction and operation of the project, ENVIRON calculated total emissions for the 2012 Project. For the construction analysis, activities for Variant B – R&D Buildings and the 7th Street Overpass option were used as the basis of the construction emissions calculations as this combination of variants was determined to result in the greatest amount of construction activity. On- and off-site construction emissions were calculated separately. On-site emissions sources include construction equipment, vehicle movement, and barge tugs while at idle at the berth; off-site emissions include trips generated by delivery trucks, worker commute vehicles, and barge tugs while transiting to and from the site. Operation-related emissions were estimated for Variant A – Working Waterfront as this variant was determined to result in a greater level of NO_x and DPM emissions than Variant B – West Gateway R&D. On-site emissions were calculated for trucks, cargo handling equipment, reefer gensets, line haul locomotives, switcher engines, ocean-going vessels while at berth (Berth 7) and during maneuvering between the berth and Bay Bridge and assist tugs during maneuvering. Off-site

emissions were calculated for ocean-going vessels while in their cruise mode (i.e., transiting between the Bay Bridge and the outer buoys outside the Golden Gate) and for assist tugs while transiting to and from the vessel. In addition, emissions from the portion of project truck trips transiting I-880 adjacent to the OAB were included in the dispersion modeling analysis. The displacement of trucks traveling between the nearest freeway and the existing recycling facilities that are to be re-located to the project area was also analyzed as an emissions reduction. All of these off-site operation phase emissions are reported as a separate line item in the emission summary tables. Emissions from employee commute vehicles were included in the regional operational emissions assessment as presented in Table 3.3-8. Due to the low toxicity and the low onsite activity for commute vehicle emissions, this source would not be expected to contribute significantly in the assessment of project health risks, and, therefore, was not included in this analysis. ENVIRON utilized the most recent emissions estimation methodologies from the California ARB. Emissions factors for construction and industrial equipment were modeled using OFFROAD 2011, and for the reefer generator set using the TRU Calculator. Because these two models provide only NO_x, PM and HC emissions, ENVIRON supplemented the emissions estimates for all other pollutants using OFFROAD 2007 as per current ARB guidance. On-road vehicle emission factors were obtained from EMFAC 2011. Marine and rail source emissions were estimated using fleet mix characterization gathered for the Port of Oakland's maritime emissions inventory and emissions factors from respective ARB and U.S. EPA published studies.

Air Dispersion Modeling. The modeling of the dispersion of the emissions through the atmosphere was performed using U.S. EPA's recommended dispersion model, AERMOD version 12060.[53] Air dispersion models such as AERMOD require a variety of inputs such as source parameters, meteorological parameters, topography information, and receptor parameters. When site-specific information is unknown, ENVIRON used default parameter sets that are designed to produce conservative (i.e., overestimate) air concentrations.

[53] On November 9, 2005, the U.S. EPA promulgated final revisions to the federal *Guideline on Air Quality Models*, in which they recommended that AERMOD be used for dispersion modeling evaluations of criteria air pollutant and toxic air pollutant emissions from typical industrial facilities. The model can be downloaded online here: www.epa.gov/scram001/dispersion_prefrec.htm.



LSA

FIGURE 3.3-1

2012 Oakland Army Base Project

Comparison of Excess Lifetime Cancer Risk

SOURCE: ENVIRON, 2012.

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Meteorological Data. To characterize the transport and dispersion of pollutants in the atmosphere, AERMOD requires hourly meteorological data from surface stations and once daily upper air data. An AERMOD-ready meteorological data set was created using AERMET[54] and U.S. EPA methods, consistent with approaches approved by BAAQMD. Meteorological data from the Oakland Sewage Treatment Plant, just north of the site (obtained from BAAQMD), and Oakland Airport were used. Default seasons were adjusted to take into account the Bay Area's climate.

Terrain Considerations. AERMOD uses a terrain preprocessor, AERMAP,[55] to determine elevations of the surrounding landscape. Data from the National Elevation Data (NED) set, available from the United States Geological Survey (USGS),[56] was utilized to import the elevation information for sources and receptors.

Emission Rates. Emission rates used in modeling are consistent with emissions described in previous sections. Emissions were assumed to occur over 24 hours for operations. Because construction will not occur during all hours of the day, construction emissions were conservatively estimated to occur between the hours of 7:00 a.m. to 11:00 p.m. for all sources with the exception of rail and tugs. These sources were assumed to operate for 24 hours.

Source Parameters. Sources were modeled as volume, area, and point sources. The list below describes how each Project source was modeled.

Volume sources:

- Truck travel on- and off-site (off-site only includes I-880)
- Rail line haul movement
- Rail switcher operations
- Vessel and tug cruise and maneuvering
- Construction sources
- Truck Idling at railroad crossings in the North Gateway Area

Area sources

- Reefer generator sets
- Off-road equipment associated with the rail yard operations

Point sources

- Vessel hotelling

Source parameters were identified using aerial photographs, ISC guidance, and/or reasonable approximations.

[54] More information on the model and the executable can be found online at: www.epa.gov/scram001/metobsdata_procaccprogs.htm.

[55] More information on the model and the executable can be found online at: www.epa.gov/ttn/scram/dispersion_related.htm.

[56] NED data available online at: seamless.usgs.gov/website/seamless/viewer.htm.

Receptors. In order to evaluate health impacts on off-site receptors, the same receptor locations as used in the 2002 EIR were used including a grid which covers nearby residential properties. Additional sensitive populations, as defined by BAAQMD,[57] within 1 mile of the project, were added. Consistent with modeling conducted in the 2002 EIR, receptors were placed at ground level.

Buildings. Buildings cause downwash[58] effects from point sources. Because the one point source, vessel hotelling, used in the model has a high release height and is located away from sensitive populations, buildings were not considered in this analysis.

Baseline Definition. For purposes of this analysis, the TAC concentration associated with the proposed project were analyzed for comparison with the impacts previously identified in the 2002 EIR. However, the 2002 EIR encompassed a larger area than the 2012 Oakland Army Base Project. Therefore, only the concentrations of TACs associated with differences from the 2012 Project were extracted from the 2002 EIR analysis to avoid overestimating the impact of the baseline.

Risk Characterization Methods. The health effects on potentially exposed sensitive populations were calculated based on the difference between TAC concentrations associated with the 2012 Project and the portion of concentration calculated for the 2002 EIR that is associated with differences from the 2012 Project.

The potentially exposed sensitive populations near the project are:

- Residents (child and adult);
- School child;
- Day care child;
- Recreational child and adult.

Toxicity Assessment. The toxicity assessment characterizes the relationship between the magnitude of exposure and the nature and magnitude of adverse health effects that may result from such exposure. For purposes of calculating exposure criteria to be used in risk assessments, adverse health effects are classified into two broad categories – cancer and non-cancer endpoints.

The chemicals of potential concern were identified in accordance with the indicator chemical approach that is consistent with the California Environmental Protection Agency (Cal/EPA) OEHHA guidance. Diesel particulate matter (DPM) was used as a surrogate measure of carcinogen exposure and chronic noncarcinogenic impacts for the mixture of chemicals that make up diesel exhaust as a whole for chronic health effects, consistent with California regulatory guidelines.[59] Because all sources analyzed in this health risk assessment were diesel-fueled, DPM was the only TAC used to estimate long-term human health. There is currently no acute non-cancer toxicity value available for DPM. Thus, speci-

[57] BAAQMD, 2011. *California Environmental Quality Act Air Quality Guidelines*. May.

[58] Turbulent eddies can be formed in the downwind side of buildings. Those eddies may cause a plume from a stack source located near the building to be drawn towards the ground much more than it would if a building or structure were not present. The effect can increase the resulting ground-level pollutant concentrations downstream of a building. The dispersion model used to evaluate the impacts of emergency generators incorporate algorithms to evaluate the effect.

[59] California Environmental Protection Agency, 2003. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. August.

ated components of diesel TOGs with acute toxicity values were included in the acute non-cancer hazard analysis.

When comparing the Project with the May 2011 BAAQMD CEQA thresholds, the estimated excess lifetime cancer risks for a resident child were adjusted using the age sensitivity factors (ASFs) recommended in the Cal/EPA OEHHA Technical Support Document (TSD)[60] and the cancer risk adjustment factors (CRAFs) recommended by BAAQMD.[61]

Estimation of Cancer Risks. Excess lifetime cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated using the chemical intake or dose at the human exchange boundaries (e.g., lungs), and the chemical-specific cancer potency factor (CPF).

Exposure Assumptions. ENVIRON conservatively evaluated potential exposures at each receptor location using residential exposure parameters obtained from the risk assessment guidelines from Cal/EPA and BAAQMD, unless otherwise noted. For this assessment, the most conservative scenario was assumed to evaluate the life-time exposure of a resident living near the proposed project site at the commencement of construction or project since the third trimester in utero.

To compare the proposed project's operational effects to the 2002 EIR, two exposure scenarios were analyzed:

- For purposes of a comparison to the 2011 BAAQMD CEQA thresholds, excess lifetime cancer risks were calculated assuming a 70-year exposure duration using the methodology recommended by the risk assessment guidelines from Cal/EPA[62] and BAAQMD[63]; and
- For purposes of a comparison of the results of the 2002 EIR (conducted under the 1999 BAAQMD Guidelines), excess lifetime cancer risks were calculated using the same methodology as specified in the 2002 EIR assuming a 30-year resident. The exposures were not adjusted by ASFs or CRAFs.

Calculation of Intake. The dose estimated for each exposure pathway is a function of the concentration of a chemical and the intake of that chemical. The intake factor for inhalation, used to estimate intake of a chemical, is based on breathing rate (L/kg-day), exposure time (hours/24 hours), exposure frequency (days/year), exposure duration (years), and averaging time (days). The chemical intake or dose is estimated by multiplying the inhalation intake factor, by the chemical concentration in air. When coupled with the chemical concentration, this calculation is mathematically equivalent to the dose algorithm given in the Cal/EPA 2003 Hot Spots guidance.

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[60] California Environmental Protection Agency, 2009. *Technical Support Document for Cancer Potency Factors: Methodologies for Derivation, Listing of Available Values, and Adjustment to Allow for Early Life Stage Exposures*. May.

[61] Bay Area Air Quality Management District, 2010. *Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines*. January.

[62] Cal/EPA. 2003. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. August.

[63] Bay Area Air Quality Management District, 2010. *Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines*. January.

i) Would the project result in ground level concentrations of non-carcinogenic TACs such that the Hazard Index would be greater than 1 for the Maximally Exposed Individual (MEI)?

Using the emission calculation and air dispersion modeling methodology described above, an estimation of chronic non-cancer hazard indices was calculated as follows.

Estimation of Chronic Non-cancer Hazard Quotients. The potential for exposure to result in chronic non-cancer effects is evaluated by comparing the estimated annual average DPM concentration (which is equivalent to the average daily air concentration) to the chronic reference exposure level (REL) for DPM to yield a ratio termed a hazard quotient or HQ.

Estimation of Acute Non-cancer Hazard Quotients/Indices. The potential exposure to emissions of pollutants resulting in acute non-cancer effects is evaluated by comparing the estimated one-hour maximum air concentration to the chemical-specific non-cancer acute RELs. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse acute non-cancer health effects from simultaneous exposure to multiple chemicals, the HQs for all chemicals are summed, yielding a Hazard Index (HI).

Results for the 2002 Project and 2012 Project for construction health indices are shown in Table 3.3-12, while results for operational impacts for the MEI are shown in Table 3.3-13.

Table 3.3-12: Project Construction Hazard Index Results

	Chronic Hazard Index	Acute Hazard Index	Annual $PM_{2.5}$ Concentration $\mu g/m^3$
2002 Project	0.077	12	0.35
2012 Project	0.030	3.7	0.14
1999 BAAQMD Threshold	**None**	**None**	**None**
2011 BAAQMD Threshold	**1**	**1**	**0.3**

Source: ENVIRON, 2012.

Table 3.3-13: Operational Health Risk Assessment Results

	Chronic Hazard Index	Acute Hazard Index	Annual $PM_{2.5}$ Concentration $\mu g/m^3$
2002 Project	0.103	NA[a]	0.47
2012 Project	0.042	0.74	0.19
1999 BAAQMD Threshold	**1.0**	**1.0**	**None**
2011 BAAQMD Threshold	**1.0**	**1.0**	**0.3**

a Specific emission data required to calculate the 2002 Project Acute HI is not available. Based on overall emissions estimates in addition to the results of the Chronic HI and carcinogenic risk evaluations, the Acute HI for the 2002 Project would be expected to be the same or higher than estimated for the 2012 Project.

Source: ENVIRON, 2012.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: EIR Mitigation Measures 4.4-2, 4.4-3, 4.4-4, 4.4-5 and 4.4-6

2012 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5 and 4.4-6, supplemented with SCA AIR-1, SCA AIR-2, and SCA AIR-3, which supersede 2002 EIR Mitigation Measure 4.4-2

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

j) Would the project result in a substantial increase in diesel emissions?

As identified in the 2002 EIR, construction and operation of the 2002 Project would result in a substantial increase in diesel emissions. As described in the analysis above, the 2012 Project would not result in any new or more significant increases in diesel emissions than were identified in the 2002 EIR. The 2012 Project would be subject to today's more stringent on-road and off-road diesel equipment emission regulations which reduce health risk impacts substantially over those that would have occurred in 2002. Nevertheless, this impact would remain significant and unavoidable.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: EIR Mitigation Measures 4.4-2, 4.4-3, 4.4-4, 4.4-5 and 4.4-6

2012 Mitigation: 2002 EIR Mitigation Measures 4.4-3, 4.4-4, 4.4-5 and 4.4-6, supplemented with SCA AIR-1, SCA AIR-2, and SCA AIR-3, which supersede 2002 EIR Mitigation Measures 4.4-1 and 4.4-2

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

3.3.6 CUMULATIVE IMPACTS

According to the 1999 and 2011 guidance from the BAAQMD, 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 impacts. Therefore, if daily average or annual emissions of construction or operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the 2012 Project would result in a cumulatively significant impact.

The 1999 CEQA Guidelines for which this analysis is based did not include a cumulative health risk threshold. Therefore a discussion of the cumulative health risk associated with the Project is provided for informational purposes in this section.

Under the 2011 BAAQMD Guidelines, the cumulative evaluation for toxics includes all sources within a 1,000 foot radius from the property line of a project. The 2012 Project is located more than

1,000 feet from the closest sensitive receptor (residences in West Oakland). However, given the size of the project, the zone of influence of the project extends into the West Oakland Community. The 2008 California ARB report on Diesel Particulate Matter Health Risk Assessment for West Oakland evaluated the increased health risk from diesel PM exposure to the residences in West Oakland from existing operations at the Port of Oakland, the BNSF and UP Rail Yards, and traffic on I-580 and I-880. The report concluded that residents of West Oakland have an increased lifetime potential cancer risk from diesel PM exposure of about 1,200 excess cancers per million, with the majority of the increased risk resulting from diesel truck traffic. The 2012 Project would add to this increased risk by increasing the activity on the project site. As shown in Table 3.3-11, the 2012 Project would result in a maximum increase in health risk of 96 in one million using today's analysis standards, as compared to 278 in one million from the 2002 project. The project would not expose persons to a non-cancer risk hazard index of greater than 10 or an annual average $PM_{2.5}$ concentration of greater than 0.8 micrograms per cubic meter.

Consistent with the 2002 EIR, even with the implementation of mitigation measures, the cumulative impact diesel emissions from the 2012 Project would be significant and unavoidable as they relate to cancer risk, but would be less than estimated for the 2002 Project.

As identified in the 2002 EIR, the proposed project would exceed the significance thresholds at the individual level and therefore, the proposed project would also contribute to any cumulatively significant air pollution impact. Implementation of the mitigation measures outlined in the 2002 EIR and implementation of the City's Standard Conditions of Approval would reduce these impacts; however, as identified in the 2002 EIR, cumulative impacts would remain significant and unavoidable.

3.3.7 CONCLUSIONS

The implementation of the 2012 Project would not result in significant new air quality impacts or a substantial increase in severity of previously identified air quality impacts compared to the 2002 EIR. Emission standards have become increasingly stringent since 2002 resulting in lower emissions for construction equipment and the operation of vehicles and other equipment as part of the project. Thus, the impacts would be similar to or even less than those forecast in the previous document. However, due to the large size of the project and lack of available additional measures to reduce emissions, impacts associated with the 2012 Project would remain significant and unavoidable.

3.3.8 REFERENCES

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3.4 BIOLOGICAL RESOURCES

This section evaluates the potential biological resources impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant biological resources impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant biological resources impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.4.1 PRIOR ANALYSIS AND CONCLUSIONS

3.4.1.1 2002 EIR Impact Findings

The 2002 EIR evaluated potential impacts to plants, animals and their habitat. The 2002 EIR concluded that the 2002 Project would have a residual significant and unavoidable impact related to invasive species:

> **Impact 4.12-8:** Redevelopment could result in a substantial increase in the risk of establishment of invasive species in the San Francisco Bay.

The 2002 EIR concluded potentially significant impacts related to species habitat, protected trees, nesting birds, and loss of wetlands, which could be reduced to less-than-significant levels:

> **Impact 4.12-1:** Redevelopment could result in the loss of 15 acres of ruderal/beach habitat. *(Note: This impact is not applicable to the 2012 Project.)*
>
> **Impact 4.12-2:** Redevelopment could result in increased raptor predation on least terns that may forage near the Gateway peninsula.
>
> **Impact 4.12-3:** Redevelopment would result in net loss of approximately 27 acres of open and covered water at New Berth 21. *(Note: This impact is not applicable to the 2012 Project.)*
>
> **Impact 4.12-4:** Redevelopment could result in both temporary impacts to herring spawning habitat during construction, and a permanent net loss of Pacific herring spawning habitat associated with the wharf pilings at existing Berths 9, 10, 20 and 21 due to construction of New Berth 21. *(Note: This impact is not applicable to the 2012 Project.)*
>
> **Impact 4.12-6:** Redevelopment may result in loss of protected trees measuring 9 inches dbh (or larger) or trees with a dbh of greater than 9 inches.
>
> **Impact 4.12-7:** Redevelopment may affect nesting migratory birds.
>
> **Impact 4.12-9:** Loss of up to approximately 0.5 acre of isolated, urban wetlands.

The 2002 EIR concluded that the 2002 Project would have a less-than-significant impact on water quality:

> **Impact 4.12-5:** Construction activities would result in a short-term reduction in water quality in the New Berth 21 fill area. *(Note: This impact is not applicable to the 2012 Project.)*

3.4.1.2 2002 EIR Mitigation Measures

Mitigation proposed for the impacts listed above reduced them to a level that was considered less than significant, with the exception of Impact 4.12-8, which was found to be significant and unavoidable. Specific mitigation measures included:

For the residual significant and avoidable impact related to invasive species, the 2002 EIR identified the following mitigation measures:

> **Mitigation Measure 4.12-10:** The Port shall continue to enforce its tariff requirements regarding ballast water and if the State law sunsets, shall implement the remainder of its ballast water ordinance, as it may be amended from time to time.
>
> **Mitigation Measure 4.12-11:** The Port shall continue to develop and implement a carrier ballast water education program.
>
> **Mitigation Measure 4.12-12:** The Port shall support international and United States efforts to adopt uniform international or national standards to avoid introduction of exotic species through shipping activities.

For the potentially significant impacts related to species habitat, protected trees, nesting birds, and loss of wetlands, the 2002 EIR identified the following mitigation measures to reduce impacts to less-than-significant levels:

> **Mitigation Measure 4.12-4:** Contractors, developers, the Port, and EBRPD shall comply with all permit conditions from the Corps, RWQCB, USFWS/NMFS and CDFG for fill. *(Note: This mitigation measure is replaced with SCA BIO-5, which requires compliance with all conditions issued by applicable agencies.)*
>
> **Mitigation Measure 4.12-5:** A qualified observer shall be present on site during all in-water construction activities near potential herring spawning areas between December 1 and March 1.
>
> **Mitigation Measure 4.12-6:** If spawning is observed, in-water construction activities shall be redirected for 200 meters around the spawning area for two weeks.
>
> **Mitigation Measure 4.12-7:** Application for a tree preservation/tree removal permit from the City of Oakland for all protected trees shall comply with the Tree Ordinance, which includes replacement of native trees at a minimum of a 1:1 ratio. The Port will replace native trees on the OARB at a minimum ratio of 1:1. *(Note: This mitigation measure is*

replaced with SCA BIO-2, which addresses the City's Tree Protection Ordinance; see subsection 3.4.5, criterion f below.)

Mitigation Measure 4.12-8: Trees shall be removed between September 1 and January 31 to avoid the nesting season (February 1 to August 31). Alternatively, field surveys shall be conducted no earlier than 45 days and no later than 20 days prior to the removal of any trees during the nesting/breeding season of bird species potentially nesting on the site to determine whether birds are present. *(Note: This mitigation measure is replaced with SCA BIO-1, which addresses tree removal during the breeding season.)*

Mitigation Measure 4.12-9: Construction shall not occur within 150 feet of an active nest until the nest is vacated or the juveniles have fledged. *(Note: This mitigation measure is replaced with SCA BIO-1, which addresses tree removal during the breeding season.)*

Mitigation Measure 4.12-13: Contractors and developers shall comply with all conditions imposed by the RWQCB for fill of wetlands. *(Note: This mitigation measure is replaced with SCA BIO-5, which requires compliance with all conditions issued by applicable agencies.)*

3.4.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

SCA BIO-1: Tree Removal During Breeding Season
Prior to issuance of a tree removal permit

To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of raptors shall not occur during the breeding season of March 15 and August 15. If tree removal must occur during the breeding season, all sites shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to start of work from March 15 through May 31, and within 30 days prior to the start of work from June 1 through August 15. The pre-removal surveys shall be submitted to the Planning and Zoning Division and the Tree Services Division of the Public Works Agency. If the survey indicates the potential presences of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the CDFG, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban

environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

SCA BIO-2: Tree Removal Permit
Prior to issuance of a demolition, grading, or building permit

Prior to removal of any protected trees, per the Protected Tree Ordinance, located on the project site or in the public right-of-way adjacent to the project, the project applicant must secure a tree removal permit from the Tree Division of the Public Works Agency, and abide by the conditions of that permit.

SCA BIO-3: Tree Replacement Plantings
Prior to issuance of a final inspection of the building permit

Replacement plantings shall be required for erosion control, groundwater replenishment, visual screening and wildlife habitat, and in order to prevent excessive loss of shade, in accordance with the following criteria:

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

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

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

d) Minimum planting areas must be available on site as follows:

   i. For Sequoia sempervirens, three hundred fifteen square feet per tree;

   ii. For all other species listed in #2 above, seven hundred (700) square feet per tree.

e) In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee as determined by the master fee schedule of the city may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.

f) Plantings shall be installed prior to the issuance of a final inspection of the building permit, subject to seasonal constraints, and shall be maintained by the project applicant until established. The Tree Reviewer of the Tree Division of the Public Works Agency may require a landscape plan showing the replacement planting and the method of irrigation. Any replacement planting which fails to become established within one year of planting shall be replanted at the project applicant's expense.

SCA BIO-4: Tree Protection During Construction
Prior to issuance of a demolition, grading, or building permit

Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:

a) Before the start of any clearing, excavation, construction or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the City Tree Reviewer. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.

b) Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the City Tree Reviewer from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.

c) No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the Tree Reviewer from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the tree reviewer. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.

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

e) If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Agency of such damage. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.

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

SCA BIO-5 Regulatory Permits and Authorizations
Prior to issuance of a demolition, grading, or building permit within vicinity of the shoreline

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 (Corps), Regional Water Quality Control Board (RWQCB), , San Francisco Bay Conservation and Development Commission (BCDC) and the City of Oakland, 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) U.S. Army Corps of Engineers (Corps): 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.

b) Regional Walter Quality Control Board (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) San Francisco Bay Conservation and Development Commission (BCDC) approvals.

SCA AES-1: Lighting Plan
(Please refer to Section 3.1, Aesthetics.)

SCA AIR-2: Dust Control
(Please refer to Section 3.3, Air Quality.)

SCA GEO-1: Erosion and Sedimentation Control
(Please refer to Section 3.6, Geology and Soils.)

SCA HAZ-1: Best Management Practices for Soil and Groundwater Hazards
(Please refer to Section 3.8, Hazards and Hazardous Materials.)

SCA HAZ-2: Hazards Best Management Practices
(Please refer to Section 3.8, Hazards and Hazardous Materials.)

SCA NOI-2: Noise Control
(Please refer to Section 3.12, Noise.)

SCA NOI-6: Pile Driving and Other Extreme Noise Generators
(Please refer to Section 3.12, Noise.)

SCA HYD-1: Stormwater Pollution Prevention Plan (SWPPP)
(Please refer to Section 3.9, Hydrology and Water Quality.)

SCA HYD-2: Post-Construction Stormwater Management Plan
(Please refer to Section 3.9, Hydrology and Water Quality.)

SCA HYD-3: Maintenance Agreement for Stormwater Treatment Measures
(Please refer to Section 3.9, Hydrology and Water Quality.)

3.4.3 UPDATED REGULATORY SETTING

The most substantive changes in the biological resources regulatory setting that have occurred since the 2002 EIR was certified involve regulations governing the management and discharge of ballast water. Current regulations governing the discharge of ballast water include the Marine Invasive Species Act of 2003 and the Coastal Ecosystems Protection Act of 2006. The Marine Invasive Species Program strives to prevent the release of non-indigenous species from commercial vessels to California waters. The program was begun in 1999, with the enactment of the Ballast Water Management for Control of Non-indigenous Species Act, which addressed the threat of species introductions through ships' ballast water during a time when these federal regulations were not mandatory.[64] In 2003, the Marine Invasive Species Act was passed, reauthorizing and expanding the 1999 Act. The Marine Invasive Species Act applies to all vessels carrying or capable of carrying ballast water into the coastal waters of the state after operating outside of the coastal waters of the state and to all ballast water and associated sediments taken on a vessel. The act requires that the ship's operator maintain specified information and records related to the vessel and ballast water management, and to make available or provide the information to representatives of the California State Lands Commission (SLC).

The Coastal Ecosystems Protection Act gives the SLC authority to implement performance standards for the discharge of ballast water and to sponsor programs to evaluate experimental ballast water treatment systems.[65] The SLC has established interim performance standards and timelines to implement these standards (Title 2, Division 3, Chapter 1, Article 4.7 Performance Standards for the Discharge of Ballast Water for Vessels Operating in California Waters; California Public Resources Code Sections 71201.7 and 71205.3).

[64] In 1999, the Port adopted and implemented a Port-specific ballast water ordinance, which was suspended in 2004 after the State's Marine Invasive Species Act made it redundant.

[65] Muir, A.A., 2011. *Managing Coastal Aquatic Invasive Species in California: Existing Policies and Policy Gap*. California Research Bureau.

In addition to the changes in regulations related to ballast water management, there have been changes in the federal Endangered Species Act (ESA) and California Endangered Species Act (CESA) that affect species with the potential to occur in the vicinity of the project site. These changes include:

- Green Sturgeon (*Acipenser medirostris*): Southern distinct population segment (DPS) was listed as threatened under the ESA in 2009 (71 FR 17757), and Critical Habitat for the Southern DPS was designated in 2009 (74 FR 52300). The project area is within designated Critical Habitat.
- Chinook Salmon (*Oncorhynchus tshawytscha*): Critical Habitat for multiple ESUs was designated in 2006 (70 FR 52488). The project area is not within designated Critical Habitat.
- Steelhead (*Oncorhynchus mykiss*): Critical Habitat for multiple ESUs was designated in 2006 (70 FR 52488). The project area is not within designated Critical Habitat.
- Longfin Smelt (*Spirinchus thaleichthys*): Species was listed as threatened under CESA in 2010, and the Bay-Delta DPS was designated a Candidate species (77 FR 19756) .
- California Brown Pelican (*Pelecanus occidentalis californicus*): Species was delisted under ESA and CESA in 2009.
- American peregrine falcon (*Falco peregrinus anatum*): Species was delisted under ESA and CESA in 2009.

Since the 2002 EIR, the impacts of in-water pile driving sound pressure levels on fish have been extensively studied, especially regarding the possibility of take of special-status fish species. The Fisheries Hydroacoustic Working Group, consisting of key technical and policy staff from resource agencies and national experts on sound propagation activities that affect fish and wildlife species of concern, prepared an Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities.[66] The agreement establishes interim maximum and accumulated sound pressure levels for listed fish from in-water pile driving. The criteria are based on sound pressures resulting from pile driving measured at in-water construction projects throughout Northern California, including several projects at the Port of Oakland.[67]

3.4.4 EXISTING CONDITIONS

Existing conditions in the project area are similar to those described in the 2002 EIR. The project site continues to be dominated by developed areas consisting primarily of railroad beds, roads, buildings, building foundations, and parking lots. Since the 2002 EIR was certified, several large buildings have been demolished. Much of the land formerly occupied by these buildings is currently vacant. These vacant parcels support a variety of native and nonnative ruderal or early seral vegetation species (see vacant areas shown on Project Description Figure 2-4).

3.4.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species

[66] Fisheries Hydroacoustic Working Group, 2008. (Federal Highway Administration; NOAA Fisheries; U.S. Fish and Wildlife Service; the Departments of Transportation from California, Oregon, and Washington; California Department of Fish and Game), *Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities*. June 12.

[67] Illinworth & Rodkin, 2007. *Compendium of Pile Driving Sound Data*. September 27.

identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;

c) Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means;

d) Substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

e) Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan;

f) Fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code (OMC) Chapter 12.36) by removal of protected trees under certain circumstances [NOTE: Factors to be considered in determining significance include the number, type, size, location and condition of (a) the protected trees to be removed and/or impacted by construction and (b) protected trees to remain, with special consideration given to native trees. Protected trees include *Quercus agrifolia* (California or coast live oak) measuring four inches diameter at breast height (dbh) or larger, and any other tree measuring nine inches dbh or larger except eucalyptus and *Pinus radiata* (Monterey pine); provided, however, that Monterey pine trees on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed are considered to be protected trees.]; or

g) Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of riparian and/or aquatic habitat through: (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) adversely impacting the riparian corridor by significantly altering vegetation or wildlife habitat.

These criteria are discussed below.

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The 2002 EIR found that impacts to candidate, sensitive, or special-status species may occur through a variety of impact mechanisms including: loss of occupied or suitable habitat (Impacts 4.12-1 and 4.12-3), development of habitat that may harbor predators (Impact 4.12-2), temporary construction-related disturbances such as turbidity or noise (Impact 4.12-5), and increased risk of establishment of invasive species in the San Francisco Bay (Impact 4.12-8). These impact mechanisms are applicable

to the 2012 Project. Except for Impact 4.12-8, all other impacts were reduced to a less-than-significant level with mitigation measures.

Ruderal (i.e., disturbed) habitat in the project area is predominately recent fill that is unlikely to provide suitable habitat for special-status plant species. The shoreline area in the vicinity of the proposed storm water outfall is highly disturbed and does not support vegetation. Thus, impacts to special-status plant species are considered to be less than significant.

Special-status fish species such as Central California Coast DPS steelhead and green sturgeon are known to occur in the vicinity of the project area; longfin smelt have been observed in the Outer Harbor.[68] Work associated with the 2012 Project would include activities in unvegetated shoreline areas and near-shore, open water areas. These areas may provide feeding and/or rearing habitat for special-status fish species. Temporary impacts associated with construction of the storm water outfall, such as installation of a sheet pile cofferdam and dewatering, have the potential to impact special-status fish species. Therefore, direct impacts to aquatic species and their habitat are considered to be potentially significant.

The spread of non-indigenous aquatic organisms (including viruses, toxic algae, and microorganisms) through the discharge of ballast water or other means (e.g., anchors, anchor chains, anchor lines, bilge pumps, drains, and through-hull connections) could also impact special-status aquatic species and their habitats. The 2012 Project would increase shipping traffic through the development of Wharf 7. The increase in shipping traffic is estimated to be one "panamax" vessel call per week. In addition, the other elements of the 2012 Project, such as the warehouse and distribution facilities and roadway and railroad improvements, would also incrementally increase vessel traffic over the no project condition. Conservatively, this increase could result in a greater risk of introduction of non-indigenous aquatic organisms. Therefore, this impact is considered potentially significant. As described in Section 3.4.3, since the 2002 EIR was certified, ballast water regulation has been implemented. While these regulations reduce the potential for introduction of new aquatic invasive species, they do not eliminate it.

Special-status wildlife species known to occasionally occur in the vicinity of the project area include several bird species such as Western Snowy Plover (*Charadrius alexandrinus nivosus)* and California Least Tern (*Sterna albifrons browni*). Temporary construction impacts such as compaction of fill, improvements to the wharf at Berth 7, and construction of the storm water outfall and of other improvements have the potential to generate noise that may adversely affect these species. This impact is considered potentially significant. In addition, establishment of tall ornamental trees, lighting fixtures or other tall elements could provide perches for raptors, which would increase the potential for predation on least terns that may forage near the Gateway peninsula. No special-status invertebrates, amphibians, reptiles or mammals are likely to be adversely affected by the 2012 Project.

Impacts to special-status species would not result in any new or more significant environmental impacts than were described in the 2002 EIR. Impacts to special-status species would likely be less than were described in the 2002 EIR because the 2012 Project does not involve loss of open water

[68] Oakland, City of, 2002. *Oakland Army Base Area Redevelopment Plan Draft Environmental Impact Report, Appendix 4-12F*.

habitat or water quality impacts associated with the New Berth 21 fill that was proposed in the 2002 EIR. Impacts to special-status fish species remain potentially significant due to construction-related disturbance associated with construction of a new storm water outfall. The impact related to potential increased predation on California Least Terns by raptors (Impact 4.12-2) remains potentially significant.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: Mitigation Measure 4.12-4, 4.12-5, 4.12-6, 4.12-8, 4.12-9, and 4.12-13 related to habitat and loss of wetlands; Mitigation Measures 4.12-10, 4.12-11 and 4.12-12 related to invasive species.

2012 Mitigation: Mitigation Measure 4.12-5, 4.12-6, related to habitat and loss of wetlands, supplemented with SCA BIO-1, SCA BIO-5. Mitigation Measures 4.12-10, and Mitigation Measures 4.12-11 and 4.12-12 as modified below:

Modified Mitigation Measure 4.12-11: The Port, and developer and sub-tenants at Berths 7 and 8 (Wharves 6½ and 7), shall continue to develop and implement a carrier ballast water education program.

Modified Mitigation Measure 4.12-12: The Port, and developer and sub-tenants at Berths 7 and 8 (Wharves 6½ and 7), shall support international and United States efforts to adopt uniform international or national standards to avoid introduction of exotic species through shipping activities.

To address potential increased predation on California Least Terns by raptors, the following two part Mitigation Measure shall be implemented:

Mitigation Measure 3.4-1a: Prior to issuance of a building permit, associated with the Planned Unit Development process, the developer shall submit a Landscape Plan for City review and approval. The plan shall not include tall ornamental trees that could provide perches for raptors in the northern project site, in the vicinity of Gateway Park.

Mitigation Measure 3.4-1b: Prior to issuance of a building permit, associated with the Planned Unit Development process, the developer shall submit a Lighting Plan for City review and approval. The plan shall note that raptor deterrents shall be placed on light standards in the northern project site, in the vicinity of Gateway Park, or lighting fixtures or posts in the area shall have limited horizontal elements which could be used as perches.

Significance After Implementation: Impacts related to species habitat and loss of wetlands: Less Than Significant (No New Impact); impacts related to the spread of non-indigenous aquatic organisms: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

No riparian habitat or sensitive terrestrial natural communities would be impacted by the 2012 Project. The spread of non-indigenous aquatic organisms through the discharge of ballast water or other means (e.g., anchors, anchor chains, anchor lines, bilge pumps, drains, and through-hull connections) could impact estuarine habitat including Essential Fish Habitat as designated by the National Marine Fisheries Service. As mentioned previously, the 2012 Project would increase shipping traffic through the development of Wharf 7. This increase could result in a greater risk of introduction of non-indigenous aquatic organisms. Therefore, this impact is considered potentially significant.

Construction of one new storm water outfall would occur along the San Francisco Bay shoreline at Berth 10. The new storm outfall will be fed by two 54-inch storm drain pipes that discharge to the Bay at an invert elevation of -4.5 feet (NAVD 88). The construction of this storm drain outfall will require work in waters. The proposed work will include installation of a steel sheet pile cofferdam around the water-side of the storm water outfall. This sheet pile cofferdam will need to start approximately 20 feet into the surrounding fill and extend in a ”U” shape configuration with the face at least 20 feet in front of the proposed outfall structure. The sheet piles will be driven to a depth of at least 10 feet into bay mud to insure cutoff of water to the work area. The proposed cofferdam will require steel whalers and struts. Once the cofferdam is installed, dewatering will occur. The outfall structure will be concrete and will extend down to a foundation grade (to be determined). Piling will most likely be used to support the concrete structure. This concrete outfall will extend at least 4 feet above the top of the twin 54-inch outfall pipes. A floodgate will be attached to the outfall at each pipe. Once dewatering is achieved, the contractor will be able to complete installation of the two twin 54-inch pipes and extend them out past the face of the concrete outfall structure. After pipe installation, the foundation construction can start by driving steel piles to the proposed tip elevation for the foundation of this outfall. Crane access will be from land and will not require barge access. After piles are driven, forming of the outfall begin. Rebar will be installed before the forming system is complete. Concrete will be poured monolithically to the top of the outfall structure. After removal of forms, backfill around the outfall structure can be completed. The 54-inch floodgates will be installed to the concrete outfall using preset inserts installed in the concrete. After installation of floodgates, the sheet pile cofferdam will be removed.

As discussed above, a small amount of fill material (concrete and steel rebar) would be discharged to shoreline and open water habitat for construction of the storm water outfall. The habitat in the vicinity of the proposed storm water outfall is highly disturbed. Thus, the discharge of fill in this area would not substantially adversely affect the existing habitat. Therefore, construction-related impacts to sensitive habitats are considered to be less than significant and would not result in any new or more significant environmental impacts than were described in the 2002 EIR.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.12-11 and 4.12-12

2012 Mitigation: 2002 EIR Mitigation Measures 4.12-11 and 4.12-12 (as modified above)

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

c) Would the project have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means?

The 2002 EIR identified 0.5 acres of isolated, urban wetlands located in the Union Pacific Railroad (UPRR) Desert Rail Yard that were proposed to be filled. As part of the remediation program, and to construct rail from the Port Rail Terminal to UPRR's main line and to the City's development areas, the 2012 Project would seek to fill this area then grade to level ground to "cap" the site prior to the construction of the two lead tracks. These impacts would be considered potentially significant.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.12-4

2012 Mitigation: 2002 EIR Mitigation Measure 4.12-4

Significance After Implementation: Less Than Significant (No New Impact)

d) Would the project substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The spread of non-indigenous aquatic organisms through the discharge of ballast water or other means (e.g., anchors, anchor chains, anchor lines, bilge pumps, drains, and through-hull connections) could impact nursery sites of native aquatic species. As mentioned previously, the 2012 Project would incrementally increase shipping traffic through the development of Wharf 7 and other improvements. This increase could result in a greater risk of introduction of non-indigenous aquatic organisms. Therefore, this impact is considered potentially significant.

Since completion of the 2002 EIR, the U.S. Army Corps of Engineers and the Port have been constructing the approximately 181-acre Middle Harbor Enhancement Area (MHEA) adjacent to 7th and Maritime Streets. The MHEA is a shallow water habitat designed with enhancements including deep water channels, shallow water channels and flats, eelgrass beds (42 acres), hard substrate, sand beach, salt marsh, and high-tide refugia for birds via islands. The MHEA is designed to function as a fish nursery and foraging site. The 2012 Project would not impede the use of this native wildlife nursery site.

There is limited wildlife use on the project site, and development of the project site would not interfere with any wildlife terrestrial migratory corridors. As identified in the 2002 EIR, Pacific herring are present in the Bay in the winter and early spring and spawn in rocky areas and on pilings. Work in subtidal rock areas and maintenance of pilings has the potential to interfere with Pacific herring spawning activity. These impacts would be considered potentially significant.

2002 Impact: Impacts to Pacific herring nursery sites related to construction: Less Than Significant; Impacts related to nursery sites of native aquatic species through potential introduction of non-indigenous aquatic organisms as a result of increased shipping traffic: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.12-5, 4.12-6, 4.12-11, and 4.12-12

2012 Mitigation: 2002 EIR Mitigation Measures 4.12-5, 4.12-6, 4.12-11, and 4.12-12 (as modified above.)

Significance After Implementation: Impacts to Pacific herring nursery sites related to construction: Less Than Significant; Impacts related to nursery sites of native aquatic species through potential introduction of non-indigenous aquatic organisms as a result of increased shipping traffic: Significant and Unavoidable; (No New Impact, and no substantial increase in severity of a previously identified significant impact).

e) Would the project fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan?

No habitat conservation plan or natural community conservation plan encompasses the project area.

2002 Impact: No Impact

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact (No New Impact)

f) Would the project fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code (OMC) Chapter 12.36) by removal of protected trees under certain circumstances?

The 2012 Project may result in loss of ornamental trees with a diameter at breast height (dbh) of greater than 9 inches and potentially Monterey pine trees on City property. Removal of these trees would conflict with the Tree Protection Ordinance. City of Oakland SCA BIO-2 would be adhered to for all tree removal activity. SCA BIO-4 would require protection of trees during project construction and SCA BIO-3 would require tree replacement plantings. As a result, this impact is considered less than significant.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.12-7

2012 Mitigation: 2002 EIR Mitigation Measure 4.12-7, superseded by SCA BIO-2 and supplemented by SCA BIO-3 and SCA BIO-4

Significance After Implementation: Less Than Significant

g) Would the project fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of riparian and/or aquatic habitat through: (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) adversely impacting the riparian corridor by significantly altering vegetation or wildlife habitat.

Water bodies at the project site are limited to the San Francisco Bay shoreline. No other water bodies or channels are located at the project site. The City of Oakland Creek Protection Ordinance (CPO)[69] defines a creek as:

> "A watercourse that is a naturally occurring swale or depression, or engineered channel which carries fresh or estuarine water either seasonally or year round within the city boundaries, as identified on the "Watershed Map of Oakland and Berkeley Area" and the "Creek and Watershed Map of Hayward and San Leandro," published by the Oakland Museum of California and as modified by the city and/or any area identified through field investigation by the Environmental Services Manager as meeting the above criteria."
>
> The "Creek and Watershed Map of Oakland and Berkeley Area"[70] designates the project site as "Original Bay and Lakes," which is a separate designation from creeks. Further, certain physical features are required to classify a water body as a creek. The City of Oakland states a creek must include all of the following three physical features: 1) hydrologic connectivity; 2) presence of channel form; and 3) topographic position. A creek begins at the first point at which these features are met. Channel form is defined as "including a bed, bank, and features that indicate actual or potential sediment movement."[71] Waters in the project area do not have defined bed and bank features of a channel or creek. Hydrologic connectively is defined as, "hydrologically connected to a waterway above and below the site or is connected to a spring,

[69] Oakland, City of. Municipal Code Section 13.16.030 B.

[70] Sowers, Janet M., 2000. Oakland Museum of California. *Creek and Watershed Map of Oakland and Berkeley.* Website: museumca.org/creeks/MapOak.html (accessed April 12, 2012).

[71] Oakland, City of, 2012. *Facilities and Environment, Permitting Guide*. Website: www2.oaklandnet.com/Government/o/PWA/o/FE/s/ID/OAK024749#what (accessed April 12, 2012).

headwaters, lake, the Estuary, or the Bay."[72] This definition indicates that the San Francisco Bay itself is not a creek but can provide water to creeks.

In conclusion, waters in the project area are not defined as a creek by the Creek Protection Ordinance. This finding is consistent with the 2002 EIR findings that there are no creeks in or near the project area, and conditions do not exist that could cause a conflict with the City's Creek Protection Ordinance.

2002 Impact: No Impact

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact (No New Impact)

3.4.6 CUMULATIVE IMPACTS

The 2002 EIR found that Redevelopment would have a potentially significant cumulative contribution to the introduction or spread of non-indigenous aquatic organisms. Since the 2002 EIR was certified, the U.S. Coast Guard and State has enacted new laws to mitigate the risk of spreading non-indigenous aquatic organisms. However, compliance with state provisions governing the discharges of ballast water would not fully mitigate these impacts. Although the 2012 Project would not result in a substantial increase in shipping traffic or ballast water discharges to the Bay, the incremental contribution to the potential introduction of non-indigenous aquatic organisms would remain cumulatively significant.

3.4.7 CONCLUSIONS

Redevelopment of the Army Base would not result in significant new biological resource impacts or a substantial increase in the severity of impacts previously identified in the 2002 EIR. Thus, impacts would be similar to those addressed in the 2002 EIR and would continue to be less than significant with appropriate mitigation, except for those related to non-indigenous aquatic organisms which are conservatively deemed significant and unavoidable. Even though new regulations have been established to prevent the spread of non-indigenous aquatic organisms through the discharge of ballast water, the project's contribution to the spread of non-indigenous aquatic organisms remains cumulatively significant and unavoidable.

3.4.8 REFERENCES

Fisheries Hydroacoustic Working Group, 2008. (Federal Highway Administration; NOAA Fisheries; U.S. Fish and Wildlife Service; the Departments of Transportation from California, Oregon, and Washington; California Department of Fish and Game), *Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities*. June 12.

Illinworth & Rodkin, 2007. *Compendium of Pile Driving Sound Data*. September 27.

[72] Ibid.

Muir, A.A., 2011. *Managing Coastal Aquatic Invasive Species in California: Existing Policies and Policy Gap*. California Research Bureau.

Oakland, City of, 2002. *Oakland Army Base Area Redevelopment Plan Draft Environmental Impact Report, Appendix 4-12F*.

Oakland, City of, 2012. *Facilities and Environment, Permitting Guide*. Website: www2.oaklandnet.com/Government/o/PWA/o/FE/s/ID/OAK024749#what (accessed April 12, 2012).

Oakland, City of. Municipal Code Section 13.16.030 B.

Sowers, Janet M., 2000. Oakland Museum of California. *Creek and Watershed Map of Oakland and Berkeley.* Website: museumca.org/creeks/MapOak.html (accessed April 12, 2012).

3.5 CULTURAL RESOURCES

Cultural resources are sites, buildings, structures, objects, and districts that may have traditional or cultural value for their historical significance. Cultural resources include a broad range of resources, examples of which include archaeological sites, paleontological resources (fossils), historic roadways and railroad tracks, and buildings of architectural significance. Generally, for a cultural resource to be considered a historical resource for purposes of CEQA, it must be 50 years or older (California Office of Historic Preservation 2006), or be formally recognized by a lead agency as constituting an historical resource.

This section evaluates the potential cultural resources impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant cultural resources impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant cultural resources impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.5.1 PRIOR ANALYSIS AND CONCLUSIONS

3.5.1.1 2002 EIR Impact Findings

The 2002 EIR concluded that the 2002 Project would have a residual significant and unavoidable impact related to the OARB Historic District:

> **Impact 4.6-2:** Redevelopment would remove all resources contributing to the OARB Historic District
>
> **Impact 4.6-3:** Redevelopment would render the OARB Historic District no longer eligible to the National and/or California Registers of Historic Places or the Local Register

The 2002 EIR concluded the potentially significant impact related to unknown subsurface cultural resources, could be reduced to a less-than-significant level:

> **Impact 4.6-1:** Redevelopment has the potential to encounter previously unknown subsurface cultural resources during ground-disturbing activities.

The 2002 EIR concluded the significant impact related to historic character, could be reduced to a less-than-significant level:

> **Impact 4.6-4:** Redevelopment would result in renovation of the SPRR (Amtrak) Station and 16th Street Tower, which could alter the historic character of the buildings in a manner that could affect their eligibility. *[Note: This impact is not applicable to the 2012 Project.]*

3.5.1.2 2002 EIR Mitigation Measures

To avoid or substantially reduce the severity of potential impacts related to removal of contributing elements of the OARB Historic District and redevelopment of the former Oakland Army Base, the 2002 EIR identified the following mitigation measures.[73] These mitigations, however, would not reduce project impacts to less-than-significant. The status of those mitigation measures from the 2002 EIR that are relevant to the current redevelopment is summarized in Table 3.5-1.

Table 3.5-1: Oakland Army Base 2002 EIR Cultural Resource Mitigation Status

Mitigation Measure	STATUS		
	Not Started	In Progress	Completed
4.6-1	✓		
4.6-2	✓		
4.6-3	✓		
4.6-4			✓
4.6-5		✓	
4.6-6			✓
4.6-7		✓	
4.6-8			✓
4.6-9		✓	
4.6-10	✓		
4.6-11			✓
4.6-14		✓	
4.6-15			✓
4.6-16			✓

Source: City of Oakland, October 2011.

For the potentially significant impact related to unknown subsurface cultural resources, the 2002 EIR identified the following mitigation measure to reduce the impact to a less-than-significant level:

> **Mitigation Measure 4.6-1:** Should previously unidentified cultural resources be encountered during redevelopment, work in that vicinity shall stop immediately, until an assessment of the finds can be made by an archaeologist. If the resource is found to be significant under CEQA, an appropriate mitigation plan must be developed. *[Note: This mitigation measure is applicable to the 2012 Project; however, it is superseded by SCA CULT-1, SCA CULT-2, and SCA CULT-3. See subsection 3.5.5, criteria b through d below.]*

For the significant and unavoidable impact related to the OARB Historic District, the 2002 EIR identified the following mitigation measures:

> **Mitigation Measure 4.6-2:** The City, Port, and OARB sub-district developers shall fund on a fair-share basis development of a commemoration site, including preparation of a Master Plan for such a site, to be located at a public place located within the Gateway development area. The City shall ensure that the scale and scope of the commemoration site reflects the actual loss of historic resources.
>
> **Mitigation Measure 4.6-3:** The City shall ensure that the commemoration site is linked to the Gateway Park and Bay Trail via a public access trail.
>
> **Mitigation Measure 4.6-4:** The City, Port, and OARB sub-district developers shall fund on a fair-share basis collection and preservation of oral histories from OARB military and civilian staff.[74]

[73] Mitigation Measure 4.6-12 was eliminated in the 2002 Final EIR and Mitigation Measure 4.6-13 is not applicable to the 2012 Project.

[74] This mitigation measure has been completed.

Mitigation Measure 4.6-5: The City, Port, and OARB sub-district developers shall fund on a fair-share basis collaboration with "military.com" or a similar military history web site.

Mitigation Measure 4.6-6: The City, Port, and OARB sub-district developers shall fund on a fair-share basis distribution of copies of the complete OARB HABS/HAER documentation prepared by the Army to: the Oakland History Room, Oakland Public Library; Bancroft Library, University of California; and the Port of Oakland Archives for the purpose of added public access to these records.[75]

Mitigation Measure 4.6-7: If determined of significant historical educational value by the Oakland Landmarks Preservation Advisory Board and the Oakland Heritage Alliance, the City, Port, and OARB sub-district developers shall fund on a fair-share basis distribution of copies of "A Job Well Done" documentary video published by the Army.

Mitigation Measure 4.6-8: The City, Port, and OARB sub-district developers shall fund on a fair-share basis preservation and long-term curation of murals from OARB Building No. 1, and OBRA shall either donate the murals to the Oakland Museum of California, or provide a permanent location elsewhere.[76]

Mitigation Measure 4.6-9: The City, Port, and OARB sub-district developers shall fund on a fair-share basis a program to salvage as whole timber posts, beams, trusses and siding of warehouses to be deconstructed. These materials shall be used on site if deconstruction is the only option. Reuse of a warehouse building or part of a warehouse building at its current location, or relocated to another Gateway location is preferable.

Mitigation Measure 4.6-10: The City, Port, and OARB sub-district developers shall fund on a fair-share basis production of a brochure describing history and architectural history of the OARB.

Mitigation Measure 4.6-11: The City, Port, and OARB sub-district developers shall fund on a fair-share basis acquisition of copies of construction documentation and photographs of historic buildings currently in the OARB files and transfer the copies to the Oakland History Room files and Port historic archives, including funding to cover costs of archiving and cataloging these materials, as well as curator costs at the Oakland History Room. While select photos and information may be exhibited at the commemoration site, the Oakland History Room is the most appropriate location for the archive.

Mitigation Measure 4.6-14: No demolition or deconstruction of contributing structures to the OARB Historic District shall occur until necessary. All efforts shall be made to retain as much of Building 1 as possible while still achieving remediation goals. (This Mitigation Measure has been revised; see Section 3.5.5a, Significance Criteria and Impact Assessment.)

[75] This mitigation has been completed.

[76] This mitigation has been completed.

Mitigation Measure 4.6-15: As part of the deconstruction and salvaging requirements for demolition of any contributing structure within the OARB Historic District (see Mitigation Measure 4.6-9), specific architectural elements, building components or fixtures should be salvaged. A professional historic preservationist shall determine which, if any such elements, components or fixtures should be retained.

Mitigation Measure 4.6-16: The City, Port, and OARB sub-district developers shall fund on a fair-share basis preparation of an Historical Resource Documentation Program. This program shall consist of a coordinated effort of primary research and documentation, with a substantial scholarly input and publicly available products. The first product of this program shall include a coordinated effort to conduct the research, writing, photo documentation, assembly and publication efforts needed to prepare a comprehensive book on the history of the Oakland Army Base. The book shall document the important contribution the Base has had to the U.S. military, to Oakland and to the nation at large.

For the significant impact related to historic character, the 2002 EIR identified the following mitigation measure to reduce impacts to a less-than-significant level:

Mitigation Measures 4.6-13: Prior to major renovation of a historically significant structure, the redeveloper of the SPRR Station and 16th Street Tower shall ensure that historically significant artifacts and features, if present, are retained and protected in place if feasible. If retention and protection is found infeasible, such artifacts and features shall be recorded and deposited with the appropriate museum. Renovation of the exterior of a historic structure shall be consistent with the Secretary's of Interior's Standards. *[Note: This mitigation measure is not applicable to the 2012 Project.]*

3.5.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

The project site consists of fill deposited along the bayshore from circa 1900 to 1945. As a result, there is a low potential for intact subsurface cultural resources. In the event that subsurface cultural resources are identified during project ground-disturbing activities (e.g., shell midden or human remains redeposited as fill; and intact historic-period deposits, such as a building foundation) the following SCA shall apply.

SCA CULT-1: Archaeological Resources
Ongoing throughout demolition, grading, and/or construction

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 of Oakland. 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 of Oakland, 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
Ongoing throughout demolition, grading, and/or construction

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 California Native American Heritage Commission (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
Ongoing throughout demolition, grading, and/or construction

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 [SVP 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.

SCA CULT-4: Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition)
Prior to issuance of a demolition permit

The project applicant shall make a good faith effort to relocate the buildings considered contributors to the Historic District to a site acceptable to the Planning and Zoning Division and the Oakland Cultural Heritage Survey. Good faith efforts include, at a minimum, the following:

a) Advertising the availability of the building by: (1) posting of large visible signs (such as banners, at a minimum of 3'x 6' size or larger) at the site; (2) placement of advertisements in Bay Area news media acceptable to the City ;and (3) contacting neighborhood associations and for-profit and not-for-profit housing and preservation organizations;

b) Maintaining a log of all the good faith efforts and submitting that along with photos of the subject building showing the large signs (banners) to the Planning and Zoning Division;

c) Maintaining the signs and advertising in place for a minimum of 90 days; and

d) Making the building available at no or nominal cost (the amount to be reviewed by the Oakland Cultural Heritage Survey) until removal is necessary for construction of a replacement project, but in no case for less than a period of 90 days after such advertisement.

3.5.3 UPDATED REGULATORY SETTING

The local and State regulatory settings for the project site are largely addressed in the 2002 EIR. The Historic Preservation Element of the City's General Plan and *CEQA Guidelines* Sections 15064.5 and 15126.4 provide the local and State regulatory settings for the project. Subsequent to the 2002 EIR, the City adopted required findings for demolition of historic properties (City of Oakland Municipal Code 17.136.075). There are four findings for demolition of a Category I building (i.e., those buildings that have been rated "A" or "B" by the Oakland Cultural Heritage Survey) that must be included with a regular Design Review Application, as listed below. A proposal to demolish a historic property must meet Finding 1 or 2 and must meet Findings 3 and 4.

Finding 1: The existing property has no reasonable use or cannot generate a reasonable economic return and the development replacing it will provide such use or generate such return.

Finding 2: The property constitutes a hazard and is economically infeasible to rehabilitate on its present site. For this finding, a hazard constitutes a threat to health and safety that is not imminent.

Finding 3: The design quality of the replacement facility is equal/superior to that of the existing facility. Analysis prepared by a historic architect or professional with equivalent experience.

Finding 4: It is economically, functionally architecturally, or structurally infeasible to incorporate the historic building into the proposed development.

3.5.4 EXISTING CONDITIONS

3.5.4.1 Archaeological Resources within the Project Site

No known prehistoric archaeological sites are located within the study area. As noted in the 2002 EIR, only one archaeological site has been recorded within a one-half-mile radius of the study area. Prehistoric site number CA-ALA-17 is reported to be located in the vicinity of 7th and Adeline streets, but its exact location is unpublished. Because the study area lies almost entirely upon fill, it is considered to have low archaeological sensitivity.

3.5.4.2 OARB Historic District

The OARB Historic District, an NRHP-eligible district, is located in the OARB sub-district, and portions are located in both the Gateway and Port development areas. The historic district is discontinuous, comprising three distinct areas, as shown in Figures 3.5-1 and 3.5-2. Two smaller areas are combined and designated the Northwest Component; the third larger area is designated the Northeast Component.

The OARB Historic District was determined eligible for listing in the NRHP as a result of a 1990 study conducted by Caltrans for the Cypress Structure Replacement Project. The District was also listed as an Area of Primary Importance in the City of Oakland's General Plan (1994).

As noted in the 2002 EIR, the OARB Historic District derives its significance from the following: The OARB played a significant role during World War II (1941–1945), and had been determined eligible for listing in the National Register of Historic Places under Criterion A, representing broad patterns of American History, at the local, state, and national levels of significance. According to the Army, it was the only complete Army port installation in the nation set up with rail marshalling yards, huge warehouses, waterside transit sheds, and piers capable of handling the largest transport cargo ships, supported by shops, a complete rail system linking the entire operation, administrative and service buildings, a dry dock for handling smaller boats and ships, and temporary quarters for housing troops. It also served as the Army's disposition center, through which moved all military personnel returning from overseas assignments.

The historic district has been identified, evaluated, and recorded to Historic American Buildings Survey (HABS) level II standards. When determined eligible for listing in the NRHP, the district incorporated OARB Buildings No. 1, 4, 60, 85, 88, 90, 99, 151 (Wharf 6), 152 (Wharf 6½), 153 (Wharf 7), 802–808, 812, 821, 822, 823, 991, and the Knight Railyard. The Knight Railyard was subsequently re-evaluated by the Army, and found to no longer possess sufficient integrity to be considered eligible for the NRHP. The Knight Railyard is also no longer considered eligible for the

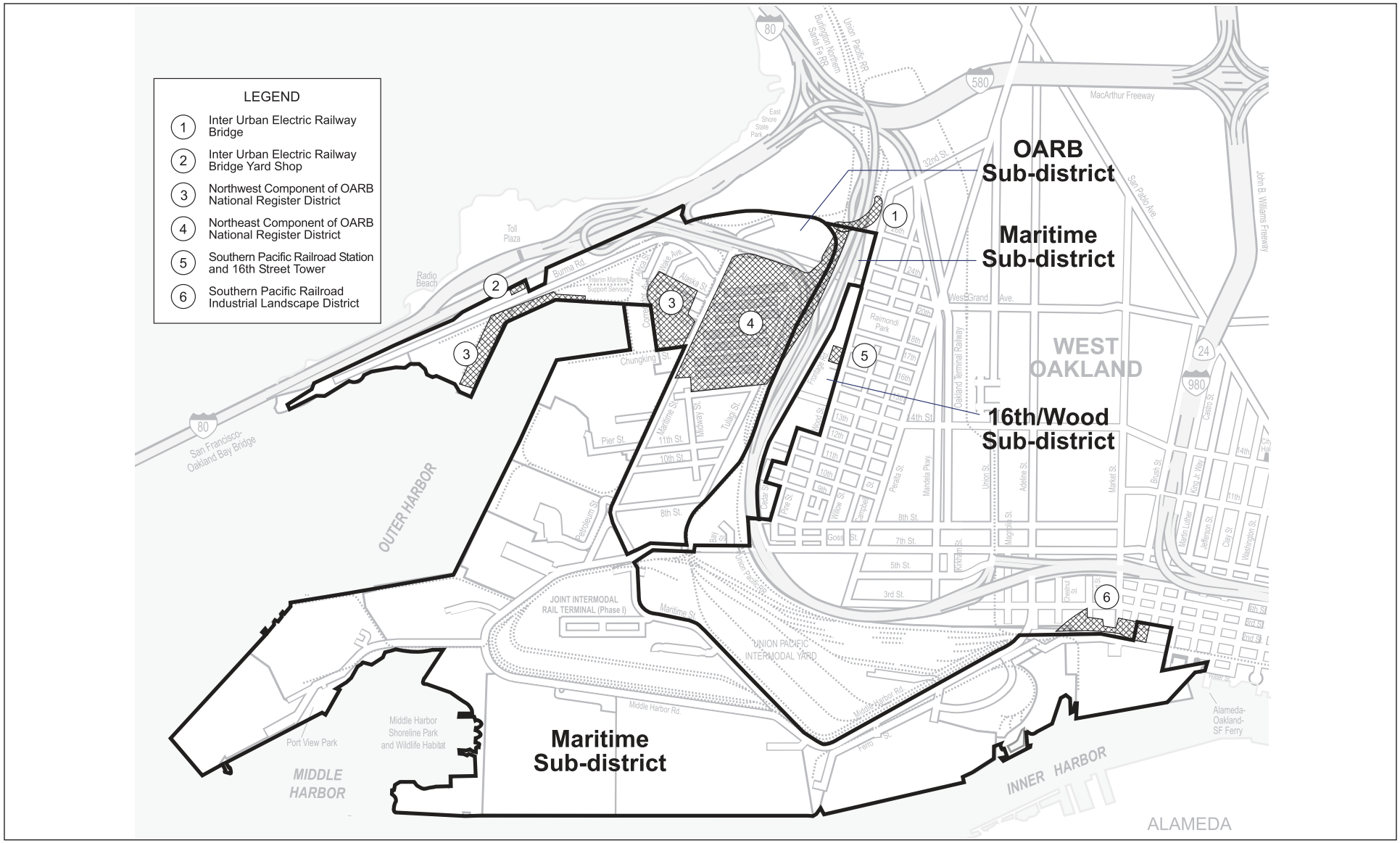

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FIGURE 3.5-1

SOURCE: G. BORCHARD & ASSOCIATES, APRIL 2002.

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2012 Oakland Army Base Project

District Historic Resources

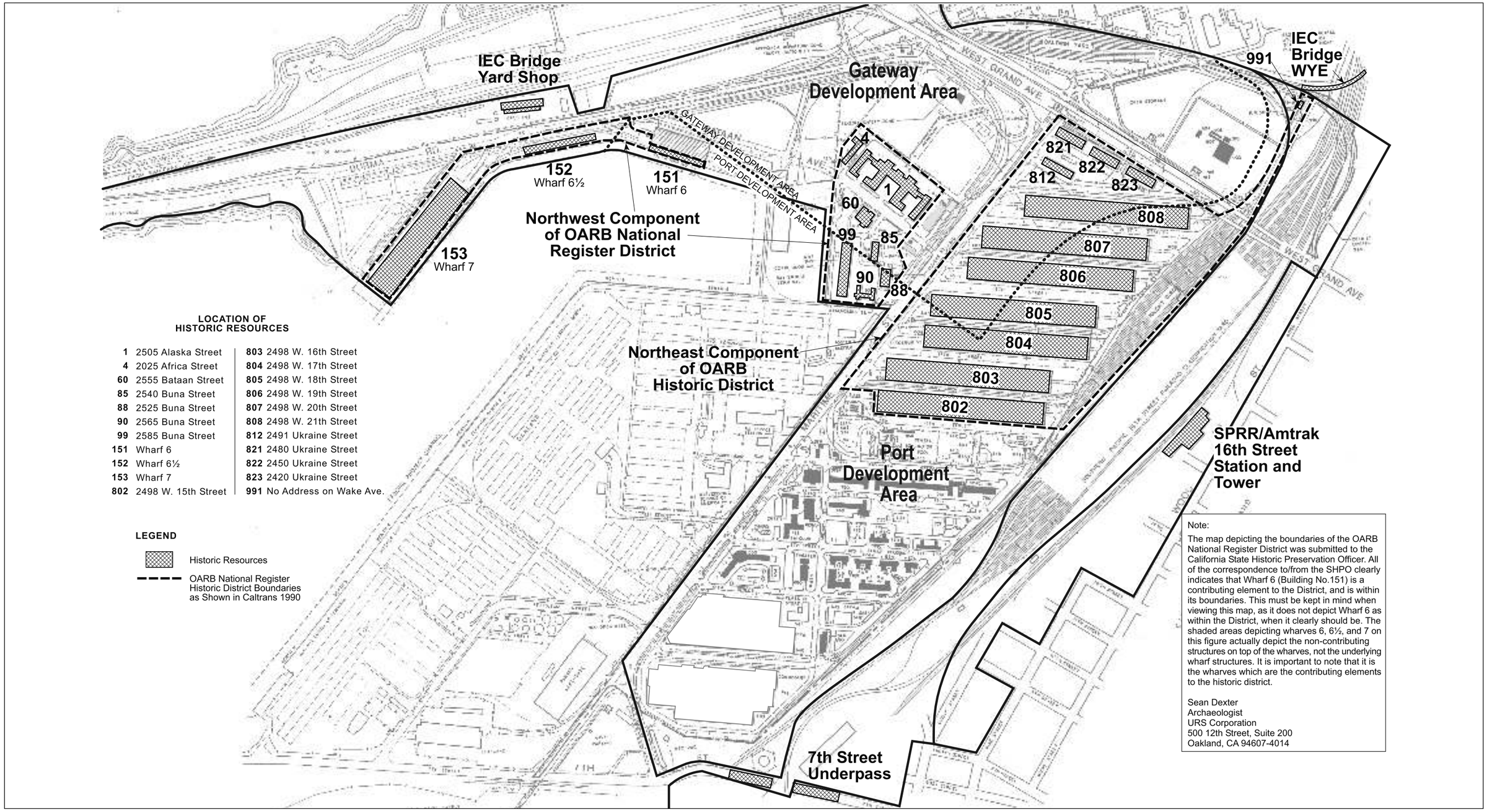

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FIGURE 3.5-2

PROJECT TRUE N

NOT TO SCALE

SOURCE: G. BORCHARD & ASSOCIATES, APRIL 2002.

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2012 Oakland Army Base Project

OARB Sub-District Historic Resources

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California or Local Register, and is not considered a historic resource. Previous evaluations[77,78] of other buildings proposed for demolition within the project site (Buildings 14, 762, 765, 780, 826, 827, 830, 832, 833, 834, 835, and 838 (see Figure 3.5-3) did not identify these as contributing elements to the OARB Historic District.

The Army and the State Office of Historic Preservation (OHP) dropped all OARB structures designated "temporary WWII" (Buildings No. 4, 85, 88, 90, 802–808, 821, 822, 823, and 991) from federal consideration pursuant to a national Programmatic Agreement concerning World War II–era military facilities. For the purpose of 2002 EIR CEQA analysis, these temporary World War II structures were considered to be historic resources (as Historic District contributors). All of the contributing structures within the OARB Historic District are categorized as "2D" by the OHP (2001: PRC Reference Numbers 4623-0441-0001 through 00024). This category means that the buildings contribute to a historic district that has been determined eligible for the National Register of Historic Places.

The 2002 EIR proposed demolition of structures within the OARB Historic District, and the 2002 EIR identified significant and unavoidable impacts related to removal of all resources contributing to the OARB Historic District and activities that would render the OARB Historic District no longer eligible to the National and/or California Registers of Historic Places or the Local Register. In 2002, the Oakland City Council certified the 2002 EIR, and adopted a Statement of Overriding Considerations relative to the significant and unavoidable cultural resources impacts.

Since certification of the 2002 EIR, several of the OARB Historic District structures and contributing features have been demolished or removed from the project site. Table 3.5-2 shows the OARB Historic Resource Number, description of the resource, and whether the resources have been demolished.

Since the OARB was last evaluated for the National Register of Historic Places, some buildings within the project site which, at the time, were not of sufficient age to qualify for listing in the National Register of Historic Places, are now 50 years old or older.[79] Buildings that are now 50 years old or older and that would be demolished by the project are 780 (1955), 801 (1961), 832 (1957), 834 (1961), and 835 (1957). These buildings were assigned a National Register status code of "6Y" in 1990 (buildings 801, 832, 834, and 835) and 2007 (building 780) by the California Office of Historic Preservation, indicating that these buildings have been determined ineligible for the National Register, but have not been evaluated for the California Register or local register of historical resources.

Previous research does not indicate that buildings 780, 801, 832, 834, and 835 qualify for either the National Register of Historic Places or California Register of Historical Resources, or otherwise qualify as a historical resource for purposes of CEQA. These buildings are not associated with the

[77] King, Gregory, 1990. California Department of Transportation. *Historic Architecture Survey Report: Part VII.D, Subarea D: Oakland Army Base*. Sacramento.

[78] California Office of Historic Preservation, 2010. *Directory of Properties in the Historic Property Data File*, May, 8, 2010. California Office of Historic Preservation, Sacramento.

[79] Fifty years is generally considered the minimum amount of time that must pass for a resource to have achieved historical significance.

OARB Historic District's historical context (Second World War) and the District's period of significance (1941-1945).

3.5.4.3 7th Street Underpass

As noted in the 2002 EIR, the 7th Street Underpass was built in 1931 and has an Oakland Heritage Survey preliminary rating of C as secondary importance based on the evaluation by Caltrans in 1990. This structure was revisited by an architectural historian in 2001, and was not found to meet the criteria of eligibility to the National, State, or Local registers and is not considered to be a significant historic resource for the purposes of CEQA.

Table 3.5-2: Status of Structures Within OARB Historic District

Resource Number [a]	Description	Currently Demolished
1	2505 Alaska Street	Yes
4	2025 Africa Street	Yes
60	2555 Baatan Street	No
85	2540 Buna Street	No
88	2525 Buna Street	No
90	2565 Buna Street	No
99	2585 Buna Street	No
151	Wharf 6	No
152	Wharf 6½	No
153	Wharf 7	No
802	2498 W. 15th Street	Yes
803	2498 W. 16th Street	No
804	2498 W. 17th Street	No
805	2498 W. 18th Street	No
806	2498 W. 19th Street	No
807	2498 W. 20th Street	No
808	2498 W. 21st Street	No
812	2491 Ukraine Street	No
821	2480 Ukraine Street	No
822	2480 Ukraine Street	No
823	2420 Ukraine Street	No

[a] Figures 3.5-2 and 3.5-3 show the location of structures.

Source: 2002 Oakland Army Base EIR; Architectural Dimensions, 2011.

3.5.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* Section15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historical Resources, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);

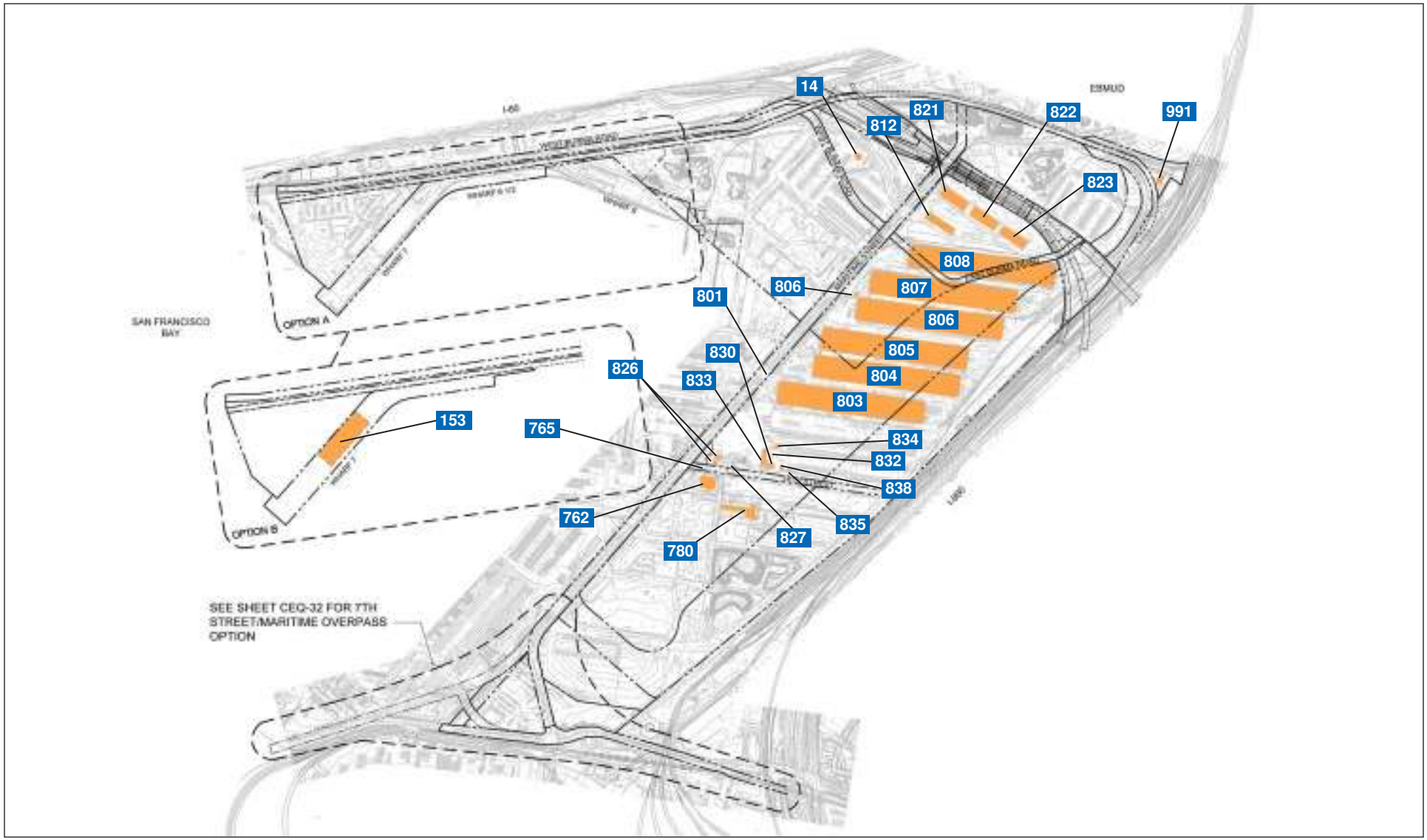

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FIGURE 3.5-3

153 HISTORIC RESOURCE BUILDINGS

EXISTING BUILDING TO REMAIN OR BE DEMOLISHED BY OTHERS

EXISTING BUILDING TO BE DEMOLISHED

N

0 600 1200
FEET

SOURCE: ARCHITECTURAL DIMENSIONS, 2011.

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2012 Oakland Army Base Project

Reconstruction/Demolition Area Plan

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b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* Section 15064.5;

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or

d) Disturb any human remains, including those interred outside of formal cemeteries.

These criteria are discussed below.

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* Section 15064.5?[80] Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired?"

The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historical Resources, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5).

The 2012 Project site contains the OARB Historic District, which was determined eligible for listing in the National Register of Historic Places by the California Office of Historic Preservation and is listed in the California Register.

The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project, and would continue to propose removing the following contributing elements to the OARB Historic District (see Figure 3.5-3):

- *Buildings 803, 804, 805, 806, 807, and 808.* These six prominent warehouses were constructed by the Army circa 1941-1942 and are south of West Grand Avenue, north of 14th Street, east of Maritime Street, and west of Interstate 880.
- *Buildings 812, 821, 822, and 823*. These four buildings are north and adjacent to warehouses 803-808. These historical buildings consist of a 1944 maintenance shop (Building 812), two 1943 warehouses (Buildings 821 and 822), and a 1942 box factory and crate shop (Building 823).
- *Building 991*. This building is north of Grand Avenue at the far northeastern end of the former OARB. Building 991 was constructed in 1942 and served as the OARB repair and maintenance facility for locomotives.

[80] Ibid.

Previous evaluations[81,82] of other buildings proposed for demolition within the project site (Buildings 14, 762, 765, 780, 826, 827, 830, 832, 833, 834, 835, and 838 [see Figure 3.5-3]) did not identify these as contributing elements to the OARB Historic District. The 2012 Project would not result in any new or more significant impacts to California Register listed resources than were described in the 2002 EIR.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.6-2, 4.6-3, 4.6-4, 4.6-5, 4.6-6, 4.6-7, 4.6-8, 4.6-9, 4.6-10, 4.6-11, 4.6-14, 4.6-15, and 4.6-16

2012 Mitigation: 2002 EIR Mitigation Measures 4.6-2, 4.6-3, 4.6-4, 4.6-5, 4.6-6, 4.6-7, 4.6-8, 4.6-9, 4.6-10, 4.6-11, 4.6-14 (as modified below), 4.6-15, and 4.6-16, supplemented by SCA CULT-4

Modified Mitigation Measure 4.6-14: No demolition or deconstruction of contributing structures to the OARB Historic District shall occur until a master plan and/or Lease Disposition and Development Agreement has been approved by the City or the Port, respectively, and demolition or deconstruction of a building is required to realize the master infrastructure development plan necessary for approved redevelopment activities, in conformity with applicable General Plan Historic Preservation Element and City of Oakland Planning requirements.[83]

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* Section 15064.5?

No archeological resources have identified in the project area. Implementation of the City's Archeological Resources Standard Condition of Approval (SCA CULT-1) and the Port's Emergency Plan of Action For Discoveries of Unknown Historic or Archaeological Resources for further review,

[81] King, Gregory, 1990, op. cit.

[82] California Office of Historic Preservation, 2010, op. cit.

[83] Remediation activities have been ongoing and will continue. Building 1 has been deconstructed. Reuse feasibility studies have been prepared, reviewed and approved determining that the reuse of all of the existing buildings have been deemed infeasible for the proposed warehouse and rail oriented logistics facilities contemplated for the 2012 Project. The 2002 EIR mitigation measure that no demolition or deconstruction may occur until a building permit is obtained is not feasible. Geological studies prepared during the master planning process for the project area have determined that the entire OARB site requires significant and time consuming grading work. As noted in Section 2, Project Description, every site needs to be dynamically compacted, surcharged with as much as 8 feet of soil, wicked of its water content, and then regraded to a new grade which will raise the sites from 2 to 3 feet above the current elevation. This is only feasible if done on a large scale, such as all of the Central Gateway or at least one third of the East Gateway. This activity cannot be performed around the existing buildings. All building must be taken down in advance of the required grading. Reuse feasibility studies prepared have concluded that the reuse of all of the existing buildings have been deemed infeasible for the port and rail oriented logistics facilities contemplated in the 2012 Project. All building must be relocated pursuant to SCA CULT-4 or deconstructed pursuant Mitigation Measure 4.6-9 in advance of the required grading. Thus, the mitigation requirement for demolishing buildings, subject to a specific building permit, is hereby deleted.

monitoring, and treatment of archeological deposits would reduce the project impacts to a less-than-significant level.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.6-1

2012 Mitigation: 2002 EIR Mitigation Measure 4.6-1 superseded by SCA CULT-1

Significance After Implementation: Less Than Significant (No New Impact)

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

While not anticipated, there is a possibility that ground disturbing construction could inadvertently damage such resources and result in a significant impact. The City's Standard Paleontological Resources Condition of Approval (SCA CULT-3) and the Port's Emergency Plan of Action For Discoveries of Unknown Historic or Archaeological Resources would ensure that no significant paleontological impacts would result form the 2012 Project.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.6-1

2012 Mitigation: 2002 EIR Mitigation Measure 4.6-1, superseded by SCA CULT-3

Significance After Implementation: Less Than Significant (No New Impact)

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Given the developed nature of the project site, it is unlikely that human remains would be discovered during construction or operation of the 2012 Project. Nonetheless, the possibility of encountering human remains during ground-disturbing activities cannot be ruled out. Implementation of the City's Human Remains Standard Condition of Approval (SCA CULT-2) and the Port's Emergency Plan of Action For Discoveries of Unknown Historic or Archaeological Resources for the treatment of human remains would reduce project impacts to a less-than-significant level.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.6-1

2012 Mitigation: 2002 EIR Mitigation Measure 4.6-1, superseded by SCA CULT-2

Significance After Implementation: Less Than Significant (No New Impact)

3.5.6 CUMULATIVE IMPACTS

Cumulative impacts to cultural resources from the 2012 Project are similar to those described in the 2002 EIR. Cumulative impacts described in the 2002 EIR include archaeological and paleontological resources, human remains, and built-environment historical resources.

The 2002 EIR determined that redevelopment of the project site would have less-than-significant cumulative impacts to subsurface cultural resources:

> "There is no evidence that significant cumulative impacts currently exist relative to loss of archaeological or paleontological resources, or human remains to which the proposed redevelopment program could contribute….Therefore, except in rare cases where data recovery may destroy the integrity of a resource, action-specific effects are avoided through site-specific mitigation, and cumulative effects to archaeological and paleontological resources are not significant.
>
> Because archaeological or paleontological or human remains are not known to occur in the redevelopment project area, in combination with past projects, other current projects, and probable future projects, redevelopment as proposed would not result in or contribute to impacts on such resources."

With respect to built-environment historical resources that contribute to the OARB Historic District's eligibility, the 2002 EIR identifies a significant and unavoidable impact from redevelopment of the project site:

> "… redevelopment of Bay Area military bases for community use…has resulted in, and is expected to continue to result in loss of a portion or all World War II-era resources at specific bases. These resources document an important time in American history, but due to their design, condition, or location, are not suited for modern community reuse, and must be demolished to accommodate such reuse … The contribution of proposed redevelopment to cumulative impacts on historic resources would be cumulatively considerable, and the incremental effect of the redevelopment program is considered significant. With application of all feasible mitigation, the impact is reduced, but not to a level that is less than significant, and the residual impact is considered unavoidable and adverse."

The 2012 Project would not result in any new or more significant cumulative impacts to resources than were described in the 2002 EIR. No new mitigation measures for cumulative impacts to cultural resources, and the mitigation measures and SCA described in this section shall apply.

3.5.7 CONCLUSIONS

Redevelopment of the OARB would not result in significant new impacts to cultural resources or a substantial increase in the severity of previously identified impacts compared to the 2002 EIR. Thus, impacts would be similar to those addressed in the 2002 EIR, and would continue to be less than significant for subsurface cultural resources and significant and unavoidable for built-environment historical resources that contribute to the District after mitigation. Previously imposed mitigation measures from the 2002 EIR and FEIR have been identified in this section and would be implemented—if not previously implemented—as part of the 2012 Project, where appropriate. This section

also identifies the applicable provisions of the City's Standard Conditions of Approval and the Port's Emergency Plan of Action For Discoveries of Unknown Historic or Archaeological Resources. No new mitigation measures are required.

3.5.8 REFERENCES

California Department of Parks and Recreation, 2006. *California Register and National Register: A Comparison (for purposes of determining eligibility for the California Register).* Technical Assistance Series No. 6. Sacramento.

California Office of Historic Preservation, 2004. *Technical Assistance Bulletin #8: Users Guide to the California Historical Resource Status Codes & Historic Resources Inventory Directory*. Sacramento.

California Office of Historic Preservation, 2010. *Directory of Properties in the Historic Property Data File*, May, 8, 2010. California Office of Historic Preservation, Sacramento.

King, Gregory, 1990. California Department of Transportation. *Historic Architecture Survey Report: Part VII.D, Subarea D: Oakland Army Base*. Sacramento.

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3.6 GEOLOGY AND SOILS

This section evaluates the potential geological and soil impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant geological and soil impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant geological and soil impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.6.1 PRIOR ANALYSIS AND CONCLUSIONS

3.6.1.1 2002 EIR Impact Findings

The 2002 EIR concluded that the 2002 Project would have potentially significant impacts, which could be reduced to less-than-significant levels due to (1) strong seismic ground shaking; (2) seismic-related ground failure, including liquefaction, lateral spreading, subsidence, or collapse; (3) localized landslides along shoreline areas; (4) erosion; (5) expansive soils; and (6) hazardous subsurface features, landfills, and unknown fill soils. Impacts included the following:

> **Impact 4.13-1:** Redevelopment could expose increased numbers of people and structures to strong seismic ground shaking, resulting in a potentially significant impact.
>
> **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; resulting in a potentially significant impact.
>
> **Impact 4.13-3:** Localized landsliding may occur in sloped shoreline area, resulting in a potentially significant impact.
>
> **Impact 4.13-4:** Under certain conditions, disturbance of soils during construction could result in erosion and a potentially significant impact.
>
> **Impact 4.13-5:** Redevelopment could occur on expansive soils, resulting in a potentially significant impact.
>
> **Impact 4.13-6:** Redevelopment elements may be located above a well, pit, sump, mound, tank vault, unmarked sewer line, landfill, or unknown fill soils, resulting in a potentially significant impact.

3.6.1.2 2002 EIR Mitigation Measures

For the potential impacts related to strong seismic ground shaking; seismic-related ground failure, including liquefaction, lateral spreading, subsidence, or collapse; localized landslides along shoreline areas; and expansive soils, the 2002 EIR identified the following mitigation measures 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 of Oakland (depending on the location of the wharf).

(Note: This mitigation measure is applicable to the 2012 Project using the 2010 version of the California Building Code and the International Building code (IBC) to replace the UBC.)

Mitigation Measure 4.13-2: Redevelopment elements shall be designed and constructed in accordance with requirements of a site-specific geotechnical evaluation.

For the potential erosion impact, the 2002 EIR identified the following mitigation measure to reduce the impact to a less-than-significant level:

Mitigation Measure 4.13-3: Prior to ground-disturbing activities, the contractor shall develop and implement a Regional Water Quality Control Board (RWQCB)-acceptable Stormwater Pollution Prevention Plan (SWPPP) that includes erosion control measures.

(Note: This mitigation measure is superseded by SCA GEO-1, and SCA HYD-1 through SCA HYD-4, which more completely address drainage, erosion control and water quality; see subsection 3.6.5, criterion b below.)

For the potential impact associated with hazardous subsurface features, landfills, and unknown fill soils, the 2002 EIR indentified the following mitigation measures to reduce the impact to a less-than-significant level:

Mitigation Measure 4.13-2: Described above.

Mitigation Measure 4.13-4: The project applicant shall thoroughly review available building and environmental records.

Mitigation Measure 4.13-5: The developer shall perform due diligence, including without limitation, retaining the services of subsurface utility locators and other technical experts prior to any ground-disturbing activities.

3.6.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather

will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

SCA GEO-1: Erosion and Sedimentation Control Plan

Prior to any grading activities

A. 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 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

B. 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.

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:

   a) 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.

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

   c) All boring logs shall be included in the soils report.

B. Test pits and trenches

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

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

C. 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.

D. 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.

E. 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 of Oakland, 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.

F. 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 require that the old soils report be recertified, that an addendum to the soils report be submitted, or that a new soils report be provided.

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 of Oakland.

   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 of Oakland 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.

SCA HYD-1: Stormwater Pollution Prevention Plan (SWPPP)
(Please refer to Section 3.9, Hydrology and Water Quality)

SCA HYD-2: Post-Construction Stormwater Management Plan
(Please refer to Section 3.9, Hydrology and Water Quality)

SCA HYD-3: Maintenance Agreement for Stormwater Treatment Measures
(Please refer to Section 3.9, Hydrology and Water Quality)

SCA HYD-4: Stormwater and Sewer
(Please refer to Section 3.9, Hydrology and Water Quality)

3.6.3 UPDATED REGULATORY SETTING

State and local governments administer programs for reducing geologic hazards and requirements for identifying and avoiding active faults, ground failure, and the effects of seismic ground shaking. Since adoption of the 2002 EIR, the California Building Code and City of Oakland Municipal Code and General Plan have been updated. The redevelopment of the Army Base must comply with current regulations. Presented below is a summary of updated regulations.

3.6.3.1 Federal

As identified in the 2002 EIR, information obtained from two federal agencies contributes to the geologic definition of the area. The U.S. Geological Survey (USGS) performs regional-scale geologic studies and mapping used by numerous agencies and others as background information about soils, geology, surface water, and groundwater. The U.S. Department of Agriculture (USDA) compiles, updates, and maintains information about soils, and presents this information in soil surveys. Soil surveys that contain soil type classifications, leaching characteristics, and other information are used by agencies and others as regulatory input or baseline data.

3.6.3.2 State

3.6.3.2.1 Alquist-Priolo Earthquake Fault Zoning Map and California Seismic Hazards Map

The 2002 EIR acknowledged that the California Department of Conservation, Division of Mines and Geology (CDMG) compiles, updates, and maintains information regarding regional and local geo-

logic conditions. This includes mapping potentially active and known active faults and seismic evaluations under the Alquist-Priolo Earthquake Fault Zone Act.

In addition, the State Geologist of the California Geological Survey is required by the California Seismic Hazards Mapping Act to identify and map areas prone to the earthquake hazards of liquefaction, seismically induced landslides, and amplified ground shaking.

3.6.3.2.2 California Building Code

Title 24 of the California Building Code or Regulations, also known as the California Building Code, sets minimum requirements for building design and construction. The 2010 version of the California Building Code was adopted by the State of California and the City of Oakland on January 1, 2011. The California Building Code is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from the national model code standards to meet State conditions; and
- Building standards, authorized by the State legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular State concerns.

Relevant provisions of the California Building Code 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.

3.6.3.3 Local

3.6.3.3.1 San Francisco Bay Plan

The 2002 EIR identified relevant policies from Part IV of the Bay Conservation and Development Commission (BCDC) San Francisco Bay Plan related to safety of fills. This section of the San Francisco Bay Plan was last amended in July 2001. There have been no updates since adoption of the 2002 EIR. Relevant policies identified in the 2002 EIR were:

> **Policy 1.** The BCDC has appointed the Engineering Criteria Review Board consisting of geologists, civil engineers specializing in geotechnical and coastal engineering, structural engineers and architects competent to and adequately empowered to: (a) establish and revise safety criteria for bay fills and structures thereon; (b) review all except minor projects for the adequacy of their specific safety provisions and make recommendations concerning these provisions; (c) prescribe an inspection system to assure placement of fill according to approved designs and (d) gather, and make available performance data developed from specific projects. These activities would complement the functions of local building departments and local planning departments, none of which are presently staffed to provide soil inspections.

Policy 2. Even if the Bay Plan indicates that a fill may be permissible, no fill or building should be constructed if hazards cannot be overcome adequately for the intended use in accordance with the criteria prescribed by the Engineering Criteria Review Board (BCDC 1989).

3.6.3.3.2 City of Oakland General Plan Policies

Since adoption of the 2002 EIR, the City General Plan has been updated. The following policies and action items from the Safety and the Open Space, Conservation and Recreation (OSCAR) Elements of the City of Oakland General Plan[84] specifically address soils, geology and/or seismic hazards and are applicable to the 2012 Project.

Policy Statements Related to Geologic Hazards

- Policy GE-1: Develop and continue to enforce and carry out regulations and programs to reduce seismic hazards and hazards from seismically triggered phenomena.
  - Action GE-1.2: Enact regulations requiring the preparation of site-specific geologic or geotechnical reports for development proposals in areas subject to earthquake-induced liquefaction, settlement or severe ground shaking, and conditioning project approval on the incorporation of necessary mitigation measures.
- Policy GE-2: Continue to enforce ordinances and implement programs that seek specifically to reduce the landslide and erosion hazards.
  - Action GE-2.1: Continue to enforce provisions under the subdivision ordinance requiring that, under certain conditions, geotechnical reports be filed and soil hazards investigations be made to prevent grading from creating unstable slopes, and that any necessary corrective actions are taken.
  - Action GE-2.2: Continue to enforce the grading, erosion and sedimentation ordinance by requiring, under certain conditions, grading permits and plans to control erosion and sedimentation.
- Policy GE-3: Continue, enhance or develop regulations and programs designed to minimize seismically related structural hazards from new and existing buildings.
  - Action GE-3.1: Adopt and amend as needed updated versions of the California building code so that optimal earthquake-protection standards are used in construction and renovation projects.
- Policy GE-4: Work to reduce potential damage from earthquakes to "lifeline" utility and transportation systems.
  - Action GE-4.4: Continue to designate underground utility districts for the purpose of replacing aboveground electric and phone wires and other structures with underground facilities, and use the planning-approval process to ensure that all new utility lines will be installed underground from the start.

Policy Statements Related to Soils

- Policy CO-1.1: Soil loss in new development. Regulate development in a manner which protects soil from degradation and misuse or other activities which significantly reduce its ability to support plant and animal life. Design all construction to ensure that soil is well secured so that unnecessary erosion, siltation of streams, and sedimentation of water bodies does not occur.

[84] Oakland, City of, 2004. *General Plan Safety Element Chapter 3*. Website: www.oaklandnet.com/government/SE/Chapter3.pdf, accessed May 15, 2008.

- Action CO-1.1.1: Soil-related development controls—Maintain, enforce, and periodically review development controls affecting soil removal, including the Grading Ordinance and the Sedimentation and Erosion Control Ordinance.
- Action CO-1.1.3: Consideration of soil constraints in development—Consider soil constraints such as shrink-swell and low soil strength in the design of buildings and roads. Suitable base materials and drainage provisions should be incorporated where necessary.

- Policy CO-1.2: Soil contamination hazards. Minimize hazards associated with soil contamination through the appropriate storage and disposal of toxic substances, monitoring of dredging activities, and clean up of contaminates sites. In this regard, require soil testing for development of any site (or dedication of any parkland or community garden) where contamination is suspected due to prior activities on the site.
- Policy CO-2.2: Unstable geologic features. Retain geologic features known to be unstable, including serpentine rock, areas of known landsliding, and fault lines, as open space. Where feasible, allow such lands to be used for low-intensity recreational activities.
  - Action CO-2.2.1: Geo-technical study requirements—Maintain Standard Operating Procedures in the Office of Planning and Building which require geo-technical studies for major developments in areas with moderate to high ground shaking or liquefaction potential, or other geologically unstable features.

Policy CO-2.3: Development on filled soils. Require development on filled soils to make special provisions to safeguard against subsidence and seismic hazards.

3.6.3.3.3 City of Oakland Municipal Code

The City of Oakland Municipal Code includes the construction codes and amendments adopted by the City. These include the California Building Code, among other codes used in construction within the City. The California Building Code Volumes 1 and 2, 2007 Edition, including the California Building Standards, 2007 Edition, published by the International Conference of Building Officials, and as modified by the amendments, additions, and deletions set forth in Title 15, was adopted by reference as the building code for the City on January 1, 2008.

3.6.4 EXISTING CONDITIONS

The project area is located within a seismically active region. The geology underlying the area consists mostly of recent, man-made fill placed on tidal marshlands and shallow estuarine muds. Sedimentary basin deposits underlie the recent fill, sand and mud. These overlie sedimentary and metamorphic rocks at greater depths. Existing conditions relating to geology and soils have not changed substantially from the regional and local setting identified in the 2002 EIR.

3.6.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Expose people or structures to substantial risk of loss, injury, or death involving:

   i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to California Geological Survey 42 and 117 and Public Resources Code section 2690 et. seq.;

   ii) Strong seismic ground shaking;

iii) Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or

iv) Landslides;

b) Result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways;

c) Be located on expansive soil, as defined in section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property;

d) Be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property;

e) Be located above landfills for which there is no approved closure or post-closure plan, or unknown fill soils, creating substantial risks to life or property; or

f) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

These criteria are discussed below.

a) Would the project expose people or structures to substantial risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to California Geological Survey 42 and 117 and Public Resources Code section 2690 et. seq.; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; iv) Landslides?

The Project is located within an active seismic area; it is located less than 12 miles from the San Andreas Fault and approximately 5 miles from the Hayward Fault, but not within an Alquist-Priolo Special Study zone. While the site will likely be subject to future strong ground shaking because of its proximity to the Hayward and San Andreas faults, the likelihood of a fault rupture is very low.

The geology of the project site includes artificial fill, beginning at ground surface and extending from 4 to 8 feet below ground surface (bgs), underlain by a sand layer then Bay mud. In addition, ground-water below the Project site is generally within approximately 5 to 9 feet of the ground surface.

Expansive soils could be present. Therefore, conditions exist at the Project site that could result in seismic-related ground failure such as liquefaction, lateral spreading (lurching), and differential settlement that could expose people or structures to substantial risk of loss, injury, or death. The Project area is flat to gently sloping and not subject to landslides.

The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant seismic hazard impacts than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.13-1 and 4.13-2

2012 Mitigation: 2002 EIR Mitigation Measures 4.13-1 and 4.13-2, supplemented with SCA GEO-2 and SCA GEO-3

Significance After Implementation: Less Than Significant (No New Impact)

b) Would the project result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways?

The 2012 Project would not result in any new or more significant erosion hazard impacts than were described in the 2002 EIR. As discussed in the 2002 EIR, soils at the project site do not constitute topsoil and therefore, redevelopment would not have the potential to impact topsoil.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.13-3

2012 Mitigation: 2002 EIR Mitigation Measure 4.13-3, superseded by SCA GEO-1 and SCA HYD-1 through SCA HYD-4

Significance After Implementation: Less Than Significant

c) Would the project be located on expansive soil, as defined in section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property?

The 2012 Project would not result in any new or more significant expansive soil hazard impacts than were described in the 2002 EIR. As discussed in the 2002 EIR, portions of the project area could contain expansive soils.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.13-1 and 4.13-2

2012 Mitigation: 2002 EIR Mitigation Measures 4.13-1 and 4.13-2, supplemented with SCA GEO-2 and SCA GEO-3

Significance After Implementation: Less Than Significant (No New Impact)

d) Would the project be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property?

The 2012 Project would not result in any new or more significant risks from potential on-site wells, pits, sumps, mounds, tank vaults, or unmarked sewer lines. As discussed in the 2002 EIR, there is potential for these hazardous subsurface features to exist in the project area.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.13-2, 4.13-4 and 4.13-5

2012 Mitigation: 2002 EIR Mitigation Measures 4.13-2, 4.13-4 and 4.13-5, supplemented with SCA GEO-2 and SCA GEO-3

Significance After Implementation: Less Than Significant (No New Impact)

e) Would the project be located above landfills for which there is no approved closure or post-closure plan, or unknown fill soils, creating substantial risks to life or property?

The 2012 Project would not be located above a former landfill. Implementation of SCA GEO-2 would ensure that the risks associated with unknown fill soils would be less than significant.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.13-2, 4.13-4 and 4.13-5

2012 Mitigation: 2002 EIR Mitigation Measures 4.13-2, 4.13-4 and 4.13-5, supplemented with SCA GEO-2

Significance After Implementation: Less Than Significant (No New Impact)

f) Have soils incapable of adequately supporting the use of septic tanks or alternative waste-water disposal systems where sewers are not available for the disposal of wastewater?

As discussed in the 2002 EIR, redevelopment as part of the 2012 Project would be served by municipal sewerage systems, and the use of septic systems in not anticipated.

2002 Impact: No Impact

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact (No New Impact)

3.6.6 CUMULATIVE IMPACTS

Potential cumulative geology and seismic impacts do not extend far beyond a project's boundaries, since such impacts are typically confined to specific locations and do not combine to create a cumulative impact. The exception to this would occur where a large geologic feature (e.g., fault zone, massive landslide) might affect an extensive area, or where the development effects from the project could affect the geologic stability of an off-site location. These circumstances are not present on the project site, and do not apply to the 2012 Project.

During the early part of the 1900s, nonprofit organizations developed model building codes used throughout the United States. Although these regional code developments were effective and responsive to regulatory needs, the time came for a single set of codes. The International Code Council (ICC) was established as a nonprofit organization dedicated to developing a single set of comprehensive and coordinated national model construction codes, now known as the International Building Code (IBC). Within California, additional state requirements were added to the IBC to form the California Model Building Codes (CBC). Localities, such as the City of Oakland, may adopt additional amendments to the CBC through local ordinance. The trend in building codes has been increased rigor in the design and implementation requirements for geotechnical and seismic safety. These requirements, as specified by state and local regulation with the adoption of the CBC and amendments, have reduced risk to life, health, and safety, and minimized seismic risk. Present and future projects within the project's geographic area are subject to these enhanced requirements and result in reducing geologic and seismic hazards. As present and future projects replacing aging infrastructure and prior development resulting from past projects with new, more rigorously regulated designs, cumulative seismic risks are incrementally reduced for future projects.

The City of Oakland Standard Conditions of Approval, discussed above, including appropriate grading requirements, and compliance with the CBC would reduce cumulative geologic effects of the 2012 Project site and surrounding area. Therefore, implementation of the project together with the impact of past, present and reasonably foreseeable future development would not make a considerable contribution to a significant cumulative geologic impact. As a result, no considerable contribution to substantial risk would result from present, current, and future projects.

3.6.7 CONCLUSIONS

Redevelopment of the Army Base would not result in significant new geological and soils impacts or a substantial increase in the severity of previously identified significant geological and soils impacts compared to the 2002 EIR. Thus, impacts would be similar to those addressed in the 2002 EIR, and would continue to be less than significant. Previously imposed mitigation measures from the 2002 EIR have been identified and, where appropriate, have been clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval. No new mitigation measures are required.

3.6.8 REFERENCES

Oakland, City of, 2004. *General Plan Safety Element Chapter 3.* Website: www.oaklandnet.com/government/SE/Chapter3.pdf, accessed May 15, 2008.

3.7 GREENHOUSE GAS EMISSIONS

This section evaluates the potential greenhouse gas emissions impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant greenhouse gas emissions impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant greenhouse gas emissions impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.7.1 PRIOR ANALYSIS AND CONCLUSIONS

Climate change and greenhouse gas emissions were not expressly addressed in the 2002 EIR. However, since information on climate change and greenhouse gas emissions was known, or could have been known in 2002, it is not legally "new information" as specifically defined under CEQA and thus is not legally required to be analyzed as part of this Addendum. However, an analysis of the proposed 2012 Project, using the previously recommended May 2011 BAAQMD CEQA Guidelines and Thresholds, has been conducted in order to provide more information to the public and decision-makers, and in the interest of being conservative. Thus, although the analysis in this Addendum evaluates climate change and greenhouse gas emissions, there is no resulting significant CEQA impact. Nevertheless, the City will impose its Standard Conditions of Approval and any Recommended Measures (that are not legally required mitigation measures). [85]

3.7.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

[85] On March 5, 2012, the Alameda County Superior Court issued a Judgment invalidating the May 2011 BAAQMD Thresholds and BAAQMD recommends the Thresholds not be used. Nevertheless, in the absence of further technical guidance, the City is generally continuing to use the May 2011 BAAQMD Guidelines in its CEQA review.

SCA GCC-1: Greenhouse Gas (GHG) Reduction Plan
Prior to issuance of a construction-related permit and ongoing as specified

The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval. The applicant shall implement the approved GHG Reduction Plan.

The goal of the GHG Reduction Plan shall be to increase energy efficiency and reduce GHG emissions by at least 20 percent, with a goal of 36 percent below the project's "adjusted" baseline GHG emissions (as explained below) to help achieve the City's goal of reducing GHG emissions. The GHG Reduction Plan shall include, at a minimum, (a) a detailed GHG emissions inventory for the project under a "business-as-usual" scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including the City's Standard Conditions of Approval, proposed mitigation measures, project design features, and other City requirements), (c) a comprehensive set of quantified additional GHG reduction measures available to further reduce GHG emissions beyond the adjusted GHG emissions, and (d) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase.

Specifically**,** the applicant/sponsor shall adhere to the following:

a) ***GHG Reduction Measures Program.*** Prepare and submit to the City Planning Director or his/her designee for review and approval a GHG Reduction Plan that specifies and quantifies GHG reduction measures that the project will implement by phase.

   Potential GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures Document (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council.

   The proposed GHG reduction measures must be reviewed and approved by the City Planning Director or his/her designee. The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "offset carbon credits," pursuant to item "b" below).

   The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; (4) off-site within the State of California; then (5) elsewhere in the United States.

b) ***Offset Carbon Credits Guidelines.*** For GHG reduction measures involving the purchase of offset carbon credits, evidence of the payment/purchase shall be submitted to the City Planning Director or his/her designee for review and approval prior to completion of the project (or prior to completion of the project phase, if the project includes more one phase).

   As with preferred locations for the implementation of all GHG reductions measures, the preference for offset carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; (3) within the State of California; then (4) elsewhere in the United States. The cost of offset carbon credit purchases shall be based on current market value at the time purchased and shall be based on the Project's operational

emissions estimated in the GHG Reduction Plan or subsequent approved emissions inventory, which may result in emissions that are higher or lower than those estimated in the GHG Reduction Plan.

c) ***Plan Implementation and Documentation.*** For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits. For operational GHG reduction measures to be incorporated into the project, the measures shall be implemented on an indefinite and ongoing basis beginning at the time of project completion (or at the completion of the project phase for phased projects).

For physical GHG reduction measures to be incorporated into off-site projects, the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval and then installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For operational GHG reduction measures to be incorporated into off-site projects, the measures shall be implemented on an indefinite and ongoing basis beginning at the time of completion of the subject project (or at the completion of the project phase for phased projects).

d) ***Compliance, Monitoring and Reporting.*** Upon City review and approval of the GHG Reduction Plan program by phase, the applicant/sponsor shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the Project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan.

Implementation of the GHG reduction measures and related requirements shall be ensured through the project applicant/sponsor's compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant/sponsor shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report (Annual Report), subject to the City Planning Director or his/her designee for review and approval. The Annual Report shall be submitted to an independent reviewer of the City Planning Director's or his/her designee's choosing, to be paid for by the project applicant/sponsor (see *Funding*, below), within two months of the anniversary of the Certificate of Occupancy.

The Annual Report shall summarize the project's implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year's Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the baseline emissions reported in the GHG Plan.

The GHG Reduction Plan shall be considered fully attained when project emissions are 36 percent below the project's "adjusted" baseline GHG emissions, as confirmed by the City Planning Director or his/her designee through an established monitoring program unless the applicant demonstrates it is infeasible to achieve the 36 percent goal. Monitoring and reporting activities will continue at the City's discretion, as discussed below.

e) ***Funding.*** Within two months after the Certificate of Occupancy, the project applicant/sponsor shall fund an escrow-type account or endowment fund to be used exclusively for preparation of Annual Reports and review and evaluation by the City Planning Director or his/her designee, or its selected peer reviewers. The escrow-type account shall be initially funded by the project applicant/sponsor in an amount determined by the City Planning Director or his/her designee and shall be replenished by the project applicant/sponsor so that the amount does not fall below an amount determined by the City Planning Director or his/her designee. The mechanism of this account shall be mutually agreed upon by the project applicant/sponsor and the City Planning Director or his/her designee, including the ability of the City to access the funds if the project

applicant/sponsor is not complying with the GHG Reduction Plan requirements, and/or to reimburse the City for its monitoring and enforcement costs.

f) ***Corrective Procedure.*** If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant/sponsor shall prepare a report for City review and approval, which proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures (Corrective GHG Action Plan). The project applicant/sponsor shall then implement the approved Corrective GHG Action Plan.

If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant/owner fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City Planning Director or his/her designee may, in addition to its other remedies, (a) assess the project applicant/sponsor a financial penalty based upon actual percentage reduction in GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed.

The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved (compared to the applicable numeric significance thresholds) or required percentage reduction from the "adjusted" baseline.

In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant/sponsor has made a good faith effort to comply with the GHG Reduction Plan.

The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the GHG Reduction Plan.

g) ***Timeline Discretion and Summary.*** The City Planning Director or his/her designee shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project.

- *Fund Escrow-type Account for City Review*: Certificate of Occupancy plus 2 months
- *Submit Baseline Inventory of "Actual Adjusted Emissions"*: Certificate of Occupancy plus 1 year
- *Submit Annual Report #1*: Certificate of Occupancy plus 2 years
- *Submit Corrective GHG Action Plan* (if needed): Certificate of Occupancy plus 4 years (based on findings of Annual Report #3)
- *Post Attainment Annual Reports*: Minimum every 3 years and at the City Planning Director's or his/her designee's reasonable discretion

3.7.3 UPDATED REGULATORY SETTING

The regulatory environment related to greenhouse gas emissions has evolved since the 2002 EIR was approved. A summary of regulations and policies related to greenhouse gas emissions and global climate change is presented below.

3.7.3.1 Federal Regulations

United States Climate Policy and Actions. The Kyoto Protocol originated in the late 1990s and, by the time of the 2002 EIR, approximately 50 nations worldwide had ratified its climate change-related policies. However, the United States has opted for a voluntary and incentive-based approach toward emissions reductions in lieu of the Kyoto Protocol's mandatory framework.

The United States continued to follow a voluntary approach to reducing greenhouse gas emissions until April 2, 2007, when the United States Supreme Court ruled that the United States Environmental Protection Agency (U.S. EPA) has the authority to regulate CO_2 emissions under the Clean Air Act (CAA). While there currently are no adopted federal regulations for the control or reduction of greenhouse gas emissions, the U.S. EPA commenced several actions in 2009 that are required to implement a regulatory approach to global climate change.

On September 30, 2009, the U.S. EPA announced a proposal that focuses on large facilities emitting over 25,000 tons of greenhouse gas emissions per year. These facilities would be required to obtain permits that would demonstrate they are using the best practices and technologies to minimize greenhouse gas emissions.

On December 7, 2009, the U.S. EPA Administrator signed a final action under the CAA, finding that six greenhouse gasses (CO_2, CH_4, N_2O, HFCs, PFCs, SF6) constitute a threat to public health and welfare and that the combined emissions from motor vehicles cause and contribute to global climate change. This U.S. EPA action does not impose any requirements on industry or other entities. However, the findings are a prerequisite to finalizing the greenhouse gas emission standards for light-duty vehicles mentioned below.

On April 1, 2010, the U.S. EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a final joint rule to establish a national program consisting of new standards for model year 2012 through 2016 light-duty vehicles that will reduce greenhouse gas emissions and improve fuel economy. U.S. EPA is finalizing the first-ever national greenhouse gas emissions standards under the CAA, and NHTSA is finalizing Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. The U.S. EPA greenhouse gas standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016, equivalent to 35.5 miles per gallon (mpg).

3.7.3.2 State Regulations

Assembly Bill 1493 Vehicular Emissions of Greenhouse Gases. In a response to the transportation sector's significant contribution to California's CO_2 emissions, AB 1493 (Pavley) was enacted on July 22, 2002. AB 1493, the New Passenger Motor Vehicle Greenhouse Gas Emission Standards legislation, amended Section 42823 and added Section 43018.5 to the California Health and Safety Code (Division 26, Part 5, Chapter 1) (added by Statutes in 2002, Chapter 200, Section 3). Section 43018.5 requires ARB to set greenhouse gas emission standards for passenger vehicles and light-duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. In setting these standards, the California Air Resources Board (ARB) considered cost effectiveness, technological feasibility, and economic impacts. ARB adopted the standards in September 2004. When fully phased in, the near-term (through 2012) standards would result in a reduction in greenhouse gas emissions of approximately 22 percent

compared to the emissions from the 2002 fleet, while the midterm (2013 to 2016) standards would result in a reduction of approximately 30 percent. To set its own greenhouse gas emissions limits on motor vehicles, California must receive a waiver from the U.S. EPA. However, on May 18, 2009, the President announced the enactment of a 35.5 miles-per-gallon (mpg) fuel economy standard for automobiles and light-duty trucks which took effect in 2012. This standard is approximately the same standard that was proposed by California; therefore, the California waiver request was not necessary.

Executive Order S-03-05. In June 2005, Governor Schwarzenegger established California's greenhouse gas emissions reduction targets in Executive Order (EO) S-3-05. The EO established the following goals: greenhouse gas emissions should be reduced to 2000 levels by 2010; to 1990 levels by 2020; and to 80 percent below 1990 levels by 2050. Furthermore, EO S-03-05 requires the Secretary of the California Environmental Protection Agency (Cal EPA) to evaluate the impacts of climate change and establish mitigation measures that would reduce potential impacts. EO S-03-05 is also known as the Greenhouse Gas Emission Reduction Targets for California Executive Order.

Assembly Bill 32 – California Global Warming Solutions Act of 2006. California's major initiatives for reducing greenhouse gas emissions are outlined in AB 32, the "Global Warming Solutions Act," passed by the California State legislature on August 31, 2006, and codified in Section 38500 et seq. of the California Health and Safety Code (HSC) (Division 25.5, Part 1 through Part 7) (added by Statutes in 2006, Chapter 488); the 2005 EO discussed above; and a 2004 ARB regulation to reduce passenger car greenhouse gas emissions. The statute begins with several legislative findings and declarations of intent, including the following:

> "Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snow pack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems." (Health and Safety Code, Section 38501)

The State goal is to reduce greenhouse gas emissions to 1990 levels by 2020, a reduction of approximately 25 percent, followed by an 80 percent reduction below 1990 levels by 2050. The main strategies for making these reductions are outlined in the Scoping Plan, which, when completed, will include a range of greenhouse gas reduction actions that can include direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

Pursuant to the requirements of HSC Section 38500 et seq., the State's reduction in global warming emissions will be accomplished through an enforceable statewide cap on global warming emissions that will be phased in starting in 2012. Additional early action items include a comprehensive framework of regulatory and nonregulatory elements that will result in significant and effective greenhouse gas emission reductions. Subsequent to approval of the early action measures, ARB developed a Climate Change Scoping Plan to lower the State's greenhouse gas emissions to meet the HSC Section 38500 et seq. 2020 limit that was approved in December 2008. In addition, AB 32 created the Climate Action Team (CAT), a consortium of representatives from State agencies who have been charged

with coordinating and implementing greenhouse gas emission reduction programs that fall outside of ARB's jurisdiction.

ARB, pursuant to the requirements of HSC Section 38500 et seq., has directed its staff to pursue and adopt so-called early action measures that would help the State in achieving its 2020 greenhouse gas reduction goals. The Early Action Measures to Reduce Greenhouse Gas Emissions in California report, published in 2007, adopted the first 37 measures. Based on additional meetings with stakeholders that included BAAQMD, ARB, and the California Air Pollution Control Officers Association (CAPCOA), existing measures were revised and new action measures were proposed. To report the findings, an Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions report was published later the same year. In the report, ARB recommends expansion of the adopted 37 strategies to a total of 44 measures. The broad spectrum of strategies includes a Low Carbon Fuel Standard (LCFS), regulations for refrigerants with high global warming potential, guidance and protocols for local governments to facilitate greenhouse gas reductions, and green ports. Measures related to Ports include a regulation to reduce emissions from diesel auxiliary engines on container ships, passenger ships, and refrigerated-cargo ships while berthing at a California Port, including the Port of Oakland. The regulation provides vessel fleet operators visiting these ports two options to reduce at-berth emissions from auxiliary engines: 1) turn off auxiliary engines for most of a vessel's stay in port and connect the vessel to some other source of power, most likely grid-based shore power; or 2) use alternative control technique(s) that achieve equivalent emission reductions.

The report describes each measure and either recommends its approval or reclassification and reports on the input received from the stakeholders group. The report analyzes the potential emissions reductions achieved from each measure, estimates the cost of the implementation, and analyzes the measure's feasibility.

Executive Order S-01-07. EO S-01-07 was put forth by Governor Schwarzenegger on January 18, 2007. California further solidified its dedication to reducing greenhouse gases above what was intended in EO S-03-05 by setting a new LCFS for transportation fuels sold within the State. EO S-1-07 sets a declining standard for greenhouse gas emissions measured in carbon dioxide equivalent (CO_2e) grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. Essentially, the order mandates the following: (1) that the state establishes a goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that an LCFS for transportation fuels be established for California. The Executive Order is also known as the Low Carbon Standard for Transportation Fuels.

Senate Bill 97, Companion Bill to Global Warming Solutions Act. To address greenhouse gas emissions and global climate change in General Plans and CEQA documents, Senate Bill (SB) 97 (by Statutes in 2007, Chapter 185) added Section 21083.05 and added and repealed Section 21097 of the California Public Resources Code (Division 13, Chapter 2.6) (added by Statutes in 2007, Chapter 185). Section 21083.05 requires the Office of Planning and Research (OPR) to develop CEQA Guidelines on how to address global warming emissions and mitigate project-specific greenhouse gases. OPR adopted amendments to the CEQA Guidelines for greenhouse gas emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments and filed them with the Secretary of State for inclusion in the California Code of Regulations. The amendments became effective on March 18, 2010. These CEQA Guideline amendments provide guidance to

public agencies regarding the analysis and mitigation of the effects of greenhouse gas emissions in draft CEQA documents.

3.7.3.3 City of Oakland Regulations

The Draft City of Oakland Energy and Climate Action Plan outlines 150 specific actions (to be implemented over a 10-year period) that will enable the City to achieve a 36 percent reduction in greenhouse gas emissions. Based on the plan, much of the reduction would result from the implementation of renewable energy and energy efficiency measures, including measures to reduce electricity consumption by 32 percent and natural gas consumption by 15 percent. These measures include the adoption of a green building ordinance for private development, the use of property-based financing for alternative energy systems, and advancing the use of transit.

Specific measures, referred to as "Priority Actions" (abbreviated PA) and intended to be implemented over the period of 2010 to 2013, applicable to the project include the following:

> **PA 5. Call for Port of Oakland Greenhouse Gas Reduction Targets and Plans.** Call upon the Port to establish greenhouse gas reduction goals associated with Port operations in alignment with the City's greenhouse gas reduction target of 36 percent below 2005 emissions by 2020, and to create plans for achieving those goals.
>
> **PA 6. Call for Climate Action by Port Tenants.** Call upon the Port to establish greenhouse gas inventories and reduction goals associated with tenant activities, and plans for achieving those goals with appropriate tenant commitments, potentially including requiring specific high-impact greenhouse gas reduction measures (e.g., electrification of land-based aviation equipment and maritime vessels).

In addition, the CAP includes objectives and actions to be pursued by 2020. The following items in the draft City of Oakland Energy and Climate Action Plan relate directly to the Port of Oakland, but have not yet been adopted by either the City or the Port.

Objective: Reduce Greenhouse Gas emissions associated with the Port of Oakland and its tenants

- **Action TLU-38:** Call upon the Port to establish greenhouse gas reduction goals associated with Port operations in alignment with the City's greenhouse gas reduction target of 36 percent below 2005 emissions by 2020, and plans for achieving those goals. *3-Year Priority, Funded*
- **Action TLU-39:** Call upon the Port to establish greenhouse gas inventories and reduction goals associated with tenant activities, and plans for achieving those goals with appropriate tenant commitments, potentially including requiring specific high-impact greenhouse gas reduction measures (e.g., electrification of land-based, aviation and maritime vessels). *3-Year Priority, Funded*
- **Action TLU-40:** Offer to partner with the Port, where appropriate, in evaluating and developing greenhouse gas reduction strategies.
- **Action TLU-41:** Collaborate with the Port to advocate that Port tenants be required to implement actions at Oakland's ports in demonstrating compliance with statewide fleet emissions reduction targets (e.g., through electrification of docked vessels).
- **Action TLU-42:** Conduct a study of potential options to implement truck re-routing in Oakland to reduce driving and parking of diesel trucks near residential neighborhoods, as well as increased enforcement of anti-idling restrictions.

- **Action TLU-43:** Make land use and planning decisions (e.g., plans for the former Army Base) in a manner that minimizes greenhouse gas emissions and other air pollutants associated with the port and related activities and travel without unduly compromising the economic value of the Port.
- **Action TLU-44:** Identify opportunities to incorporate greenhouse gas reduction actions and/or performance requirements applicable to the Port of Oakland within updates to the City's general Plan.

The City's General Plan also includes policies related to greenhouse gas emissions and climate change. The Land Use and Transportation Element (LUTE) includes policies encouraging transit-oriented development, new bikeways and pedestrian ways, increased public transit, and infill development. The Open Space, Conservation and Recreation (OSCAR) Element includes policies to conserve open space, which would protect vegetation to effect cooler climate, reduce excessive solar gain and absorb CO_2; policies that encourage stormwater management to accommodate increased storms and flooding; and policies that encourage energy efficiency and use of alternative energy sources, which would directly reduce greenhouse gas emissions. The Historic Preservation Element encourages the reuse of existing buildings, which would reduce landfill material, avoid the incineration of materials, and the need for new material production.

3.7.4 EXISTING CONDITIONS

3.7.4.1 Description of Global Climate Change and Its Sources

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. Global surface temperatures have risen by 0.74°C ± 0.18°C (1.1 °F ± 0.4°F) between 1906 and 2005. The rate of warming over the last 50 years of this period is almost double that over the last 100 years.[86] The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide and other greenhouse gases are the primary causes of the human-induced component of warming. greenhouse gases are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[87]

Greenhouse gases are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

[86] Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.*

[87] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of GHG results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

Over the last 200 years, humans have caused substantial quantities of greenhouse gases to be released into the atmosphere. These extra emissions are increasing greenhouse gas concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade greenhouse gases include naturally-occurring greenhouse gases such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of greenhouse gases above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each greenhouse gas to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant greenhouse gas; the definition of GWP for a particular greenhouse gas is the ratio of heat trapped by one unit mass of the greenhouse gas to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. greenhouse gas emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table 3.7-1 shows the GWPs for each type of greenhouse gas. For example, SF_6 is 22,800 times more potent at contributing to global warming than CO_2. The following discussion summarizes the characteristics of the six greenhouse gases.

Table 3.7-1: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoromethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: IPCC, 2007. *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals and plants, volcanic outgassing, decomposition of organic matter, and evaporation from the oceans. Human-caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of man-made emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO_2 and consequently the gas is building up in the atmosphere.

*Methane***.** CH_4 is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California. CH_4 accounted for approximately 6 percent of gross climate change emissions (CO_2e) in California in 2002.

Total annual emissions of CH_4 are approximately 500 million tons, with manmade emissions accounting for the majority. As with CO_2, the major removal process of atmospheric CH_4 – a chemical breakdown in the atmosphere – cannot keep pace with source emissions, and CH_4 concentrations in the atmosphere are increasing.

*Nitrous Oxide***.** N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N_2O is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. N_2O emissions accounted for nearly 7 percent of man-made greenhouse gas emissions (CO_2e) in California in 2002.

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[88] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 3.5 percent of man-made greenhouse gas emissions (CO_2e) in California in 2002.

Global Emissions. Worldwide emissions of greenhouse gases in 2004 were 27 billion metric tons of CO_2e per year.[89] Global estimates are based on country inventories developed as part of programs of the United Nations Framework Convention on Climate Change (UNFCCC).

United States Emissions. In 2010, the United States emitted approximately 7.0 billion metric tons of CO_2e, or approximately 25 tons per year per person. Of the six major sectors nationwide – electric power industry, transportation, industry, agriculture, commercial, residential – the electric power industry and transportation sectors combined account for approximately 74 percent of the greenhouse gas emissions. The majority of the electrical power industry and all of the transportation emissions

[88] The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was intended to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

[89] Combined total of Annex I and Non-Annex I Country CO_2eq emissions. United Nations Framework Convention on Climate Change, 2007. *Greenhouse Gas Inventory Data.* Website: unfccc.int/ghg_data/ghg_data_unfccc/time_series_annex_i/items/3814.php and http://maindb.unfccc.int/library/view_pdf.pl?url= http://unfccc.int/resource/docs/2005/sbi/eng/18a02.pdf.

are generated from direct fossil fuel combustion. Between 1990 and 2010, total United States greenhouse gas emissions rose approximately 12.1 percent.[90]

State of California Emissions. According to California Air Resources Board (ARB) emission inventory estimates, California emitted approximately 457 million metric tons of CO_2e ($MMTCO_2e$) emissions in 2009.[91] This large number is due primarily to the sheer size of California compared to other states. By contrast, California has the 46th lowest per capita CO_2 emission rate from fossil fuel combustion in the country, due to the success of its energy efficiency and renewable energy programs and commitments that have lowered the State's greenhouse gas emissions rate of growth by more than half of what it would have been otherwise.[92]

The California Environmental Protection Agency (Cal/EPA) Climate Action Team stated in its March 2006 report that the composition of gross climate change pollutant emissions in California in 2002 (expressed in terms of CO_2e) was as follows:

- CO_2 accounted for 83.3 percent;
- CH_4 accounted for 6.4 percent;
- N_2O accounted for 6.8 percent; and
- HFCs, PFCs, and SF_6 accounted for 3.5 percent[93]

The California ARB estimates that transportation is the source of approximately 38 percent of the State's greenhouse gas emissions in 2009, followed by electricity generation (both in-State and out-of-State) at 23 percent, and industrial sources at 19.5 percent. The remaining sources of greenhouse gas emissions are residential and commercial activities at 6 percent, agriculture at 6 percent, unspecified gases at 3 percent, and recycling and waste at 1 percent.[94]

The California ARB is responsible for developing the California Greenhouse Gas Emission Inventory. This inventory estimates the amount of greenhouse gases emitted to and removed from the atmosphere by human activities within the State of California and supports the AB 32 Climate Change Program. The California ARB's current greenhouse gas emission inventory covers the years 1990–2004 and is based on fuel use, equipment activity, industrial processes, and other relevant data (e.g., housing, landfill activity, agricultural lands). The emission inventory estimates are based on the actual amount of all fuels combusted in the State, which accounts for over 85 percent of the greenhouse gas emissions within California.

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[90] U.S. Environmental Protection Agency, 2012. *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2010*. February.

[91] California Air Resources Board, 2011. *California Greenhouse Gas Inventory 2000 to 2009*. December.

[92] California Energy Commission, 2007. *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 - Final Staff Report*, publication # CEC-600-2006-013-SF, Sacramento, CA. December 22, 2006; and January 23, 2007, update to that report.

[93] California Environmental Protection Agency, 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature.* March.

[94] California Air Resources Board, 2011, op. cit.

The California ARB staff has projected statewide unregulated greenhouse gas emissions for 2020, which represent the emissions that would be expected to occur in the absence of any greenhouse gas reduction actions, will be 596 MMT CO_2e. Greenhouse gas emissions from the transportation and electricity sectors as a whole are expected to increase, but remain at approximately 38 percent and 23 percent of total CO_2e emissions, respectively. The industrial sector consists of large stationary sources of greenhouse gas emissions, and the percentage of the total 2020 emissions is projected to be 17 percent of total CO_2e emissions. The remaining sources of greenhouse gas emissions in 2020 are high global warming potential gases at 8 percent, residential and commercial activities at 8 percent, agriculture at 5 percent, and recycling and waste at 1 percent.[95]

3.7.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

As stated above in section 3.7.1, there were no Significance Criteria for greenhouse gas emissions in 2002. For informational purposes only, listed below are the BAAQMD's May 2011 quantitative significance criteria:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, specifically:
   - For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO_2 annually.
   - 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.

b) Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions. Construction of the project would required demolition of the existing structures and pavement, and removing or capping old utility systems (sewer, storm drain, water electrical, gas, etc.). In addition, deconstruction and removal of several warehouses would be required to accommodate the proposed new construction and/or infrastructure. Site preparation would include the process of deep dynamic compaction, import of soil, and surcharge and wicking as part of the 2012 Project. Approximately 2 million cubic yards of fill would be required to bring the project site up to a new elevation that allows for compliance with current engineering regulations for stormwater flow and anticipated sea level rise. Construction of the project would occur for approximately 8 years.

During this time, construction activities, such as site preparation, site grading, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew would produce combustion emissions from various sources. During construction of the project, greenhouse gases would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates greenhouse gases such as CO_2,

[95] Ibid.

CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

Anticipated construction activivites and resulting construction emissions were not estimated in the 2002 EIR although it is anticipated that construction operations in 2012 would be similar to those proposed in 2002.

Construction emissions for the 2002 Project and 2012 Project were calculated assuming the same level of construction activity. Construction emissions for the proposed 2012 Project were estimated using emission factors from the California ARB's latest OFFROAD 2011 and EMFAC 2011 models and the U.S. EPA's AP-42 Handbook. Emissions for the 2002 Project were calculated using average fleet data for the 2002 Project construction period (2002 through 2010). Results indicate the 2002 project would have generated approximately 70,221 total metric tons of CO_2e. Based on the anticipated construction schedule and equipment usage, greenhouse gas emissions associated with construction of the 2012 Project are estimate at a total of 69,938 metric tons of CO_2e. Following City of Oakland guidelines for the quantification of greenhouse gas emissions, the project's greenhouse gas emissions when annualized over a 40-year period would be 1,748 metric tons of CO_2e per year. A 40-year period is used because 40 years is considered the average life expectancy of a building before it is remodeled with considerations for increased energy efficiency. Construction emissions by source are shown in Table 3.7-2.

Table 3.7-2: Greenhouse Gas Emission Estimates from Construction Activities

	Total Construction Emissions in Metric Tons[a]			
Emissions Source	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
2002 Project				
Barge Tugs	6,051	1	0	6,131
Construction Equipment	19,555	3	0	19,608
Construction Trucks	41,756	2	1	42,138
Employee Commute	2,296	0	0	2,344
Total 2002 Project Construction Emissions	**69,658**	**6**	**1**	**70,221**
2012 Project				
Barge Tugs	6,051	1	0	6,134
Construction Equipment	19,555	1	0	19,585
Construction Trucks	41,561	1	1	41,910
Employee Commute	2,297	0	0	2,310
Total 2012 Project Construction Emissions	**69,464**	**3**	**1**	**69,938**

[a] Emissions include on-site and off-site sources over the entire period of construction (July 2012 through December 2019)

Source: ENVIRON, 2012.

Operational Emissions. Operation of the proposed project would include a Trade and Logistics Center that combines a Port of Oakland development program and a City of Oakland development program for the construction of new buildings (such as warehouse and distribution facilities) primarily to support cargo logistics uses. The proposed project would also implement the infrastructure necessary to support the project including a new rail yard, roadway and railroad improvements as well as water, sewer, storm drainage, telecommunications, security, gas, electrical and other utility improvements. Operation of the proposed project would generate greenhouse gas emissions in the form of exhaust from cargo equipment, ships, tugs, trains, transport trucks and other vehicles. The

project would also generate greenhouse gas emissions from electricity use, natural gas for space and water heating, waste and wastewater, and solid waste.

Prologis/CCIG intends to use sustainable design concepts for infrastructure systems such as: renewable and emerging technology energy systems; energy efficient building design; central plants for heating and cooling with interconnected hot and chilled water distribution systems; energy monitoring to verify and promote the success of energy efficiency designs; and recycled water (storm and sewage) for landscape irrigation and/or toilet flushing. These energy efficient features of the project would contribute to a reduction in greenhouse gas emissions over business-as-usual conditions due to the resulting reduced electricity demand over the business-as-usual conditions that were included in the project's emission estimates. The project would also include the installation of solar photovoltaic (PV) panels on roof areas of the proposed warehouse buildings, which could generate up to 20,633 annual megawatt hours (MWh), or approximately 20 percent of the project's projected electricity demand.[96] The installation of solar panels was included in the project's emission calculations.

Greenhouse gas emissions from mobile operation sources were calculated for the operation year of 2020 using emission factors from AP-42, OFFROAD 2011 and EMFAC 2011. Emissions from energy use, water, passenger vehicles, and solid waste were calculated using the Bay Area Greenhouse Gas Estimator Model (BGM). Results of the emission calculations are shown in Table 3.7-3. Additional calculation details are provided in Appendix A.

As shown in Table 3.7-3, the 2002 Project would result in total CO_2e emissions of 171,292 metric tons per year, which would exceed the BAAQMD's 2011 recommended greenhouse gas threshold of 1,100 metric tons per year. The 2012 Project would result in total CO_2e emissions of 17,869 metric tons per year which would also exceed the BAAQMD's 2011 recommended greenhouse gas emissions threshold. The project would employ 2,635 people, resulting in greenhouse gas emissions of 6.8 metric tons CO_2e per service population which also exceeds the BAAQMD's 2011 Threshold of 4.6 metric tons CO_2e per service population. As noted above, this analysis is provided for informational purposes only; the 1999 BAAQMD Thresholds that are the applicable thresholds for this project do not contain a greenhouse gas threshold, therefore this impact would not be considered significant. Moreover, the 2012 Project generates substantially less greenhouse gases than the 2002 project.

[96] AECOM, 2011. OGTIC Solor Power Capacity. December.

Table 3.7-3: Project Operation Greenhouse Gas Emissions in Metric Tons Per Year

Emissions Source	Operational Emissions			
	CO_2	CH_4	N_2O	CO_2e
2002 Project				
Cars/Delivery Trucks	156,457	4.0	73.0	178,316
Trucks	2,793	0.2	1.4	3,175
Trains (Linehaul)	180	0.07	0.08	165
Railyard Equipment (includes Switchers)	3,881	0.25	0.0	3,882
Electricity	10,856	0.09	0.05	10,873
Natural Gas	2,074	0.20	0.00	2,079
Water & Wastewater	239	0.0	0.0	239
Solid Waste	80	545	0.0	11,523
Less 1995 Alternative Baseline	35,727	0.73	17	40,715
Annualized Construction Emissions				1,755
Total 2002 Project Annual CO_2e Emissions				**171,292**
2012 Project				
Marine Cargo Handling Equipment	86	0	0	86
Ships				
Hotelling	99	0	0	100
Maneuvering	53	0	0	54
Cruising	1,108	0	0	1,124
Assist Tugs				
Assisting	220	0	0	222
Transiting	162	0	0	164
Trains (Linehaul and Switchers)[a]	1,652	0	0	1,658
Rail Cargo Handling Equipment	7,341	0	0	7,351
Transportation (Trucks)	13,597	0	0	13,689
Transportation (Passenger Cars)	21,958	1.31	0.0	21,986
Electricity[c]	3,400	0.06	0.06	3,106
Natural Gas	867	0.08	0.0	869
Water & Wastewater	118	0.0	0.0	119
Solid Waste	44	298	0.0	6,308
Less 1995 Alternative Baseline	35,727	0.73	17	40,715
Annualized Construction Emissions				**1,748**
Total 2012 Project Annual CO_2e Emissions[b]				**17,869**

[a] Emission factors based on Port of Los Angeles Carbon Footprinting for Ports Guidance Document for locomotive engines.

[b] Total emissions do not include off-site ship cruising emissions or off-site assist tug transitioning.

[c] Assumes the generation of 20,633 annual megawatt hours (MWh) from installation of solar photovoltaic (PV) panels on roof areas of the proposed warehouse buildings.

Source: ENVIRON and LSA, Associates, Inc., 2012.

The 2012 Project would be required to implement SCA GCC-1 which would require the project applicant to prepare a Greenhouse Gas Reduction Plan which will demonstrate how the project would reduce greenhouse gas emissions using design features and/or the purchase of carbon offset credits.

Impact: Less Than Significant

Mitigation: None Required

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The California Environmental Protection Agency Climate Action Team (CAT) and the ARB have developed several reports to achieve the Governor's greenhouse gas targets that rely on voluntary actions of California businesses, local government and community groups, and State incentive and regulatory programs. These include the CAT's 2006 Report to Governor Schwarzenegger and the Legislature, ARB's 2007 Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California, and ARB's Climate Change Scoping Plan: a Framework for Change. The reports identify strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05 and AB 32. The adopted Scoping Plan includes proposed greenhouse gas reductions from direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as cap-and-trade systems.

The transportation sector regulations 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 greenhouse gas emissions associated with the project. Additionally, the adopted Early Action Measure related to shore power regulations at container terminals, would contribute to a reduction in operational Port greenhouse gas emissions. The Port and tenants are now installing shore power facilities at the terminals. Additional State measures include emission reductions assumed as part of the Scoping Plan, including light-duty vehicle greenhouse gas standards ("Pavley standards"), low carbon fuel standard, and energy efficiency measures.

The City of Oakland Draft Energy and Climate Action Plan (ECAP) includes strategies to reduce greenhouse gas emissions from land use, transportation, and energy use to achieve the emission reduction target. Consistent with this plan, as described above, the project would use sustainable design concepts for infrastructure systems such as: renewable and emerging technology energy systems; energy efficient building design; central plants for heating and cooling with interconnected hot and chilled water distribution systems; energy monitoring to verify and promote the success of energy efficiency designs; and recycled water (storm and sewage) for landscape irrigation and/or toilet flushing. The project would also include the installation of solar photovoltaic (PV) panels on roof areas of the proposed warehouse buildings.

The 2012 Project would not conflict with the objectives and actions identified in the City's Draft ECAP. Under the 2012 Project, the Port will continue to reduce emissions associated with Port rail operations and on-site warehouse tenant activities, through implementation of the Port's Maritime Air Quality Improvement Plan.

The 2012 Project would be required to implement SCA GCC-1 which would require the preparation of a Greenhouse Gas Reduction Plan which will demonstrate how the project would reduce greenhouse gas emissions.

The 2012 Project would not conflict with the State goal of reducing greenhouse gas emissions and would not conflict with the AB 32 Scoping Plan or the early action measures. The project would be subject to all applicable permit and planning requirements in place or adopted by the City of Oakland and is would not conflict with the City's Draft Energy and Climate Action Plan. Therefore, the

proposed project would not conflict with any applicable plan, policy or regulation for the purpose of reducing greenhouse gas emissions. As noted above, this analysis is provided for informational purposes only; the 1999 BAAQMD CEQA Guidelines which are the applicable guidelines for this project do not contain a greenhouse gas plan consistency requirement. Moreover, the 2012 Project intends to implement green building design features and would generate substantially less greenhouse gas emissions than the 2002 Project.

Impact: Less Than Significant

Mitigation: None Required

3.7.6 CUMULATIVE IMPACTS

Greenhouse gas emissions are, by their nature, cumulative impacts. Consequently, the cumulative analysis is the same as the foregoing discussion concerning project impacts. As indicated in the analysis above, the project would generate greenhouse gas emissions, but as previously noted, this is not new information since information on climate change and greenhouse gas emissions was known or could have been known in 2002. Implementation of the City's Standard Conditions of Approval would reduce the project's greenhouse gas emissions. Moreover, the 2012 Project intends to implement green building features and would generate substantially less greenhouse gas emissions than the 2002 Project. Moreover, the 2012 Project intends to implement green building design features and would generate substantially less greenhouse gas emissions than the 2002 Project.

3.7.7 CONCLUSIONS

Implementation of the proposed project would result in the generation of greenhouse gas emissions from ships, trains, tugs, trucks and operation of buildings on-site, but as noted above, climate change and greenhouse gas emissions were not expressly addressed in the 2002 EIR. However, since information on climate change and greenhouse gas 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 greenhouse gas emissions than the 2002 Project.

Thus, although the analysis evaluates climate change and greenhouse gas, there is no resulting significant CEQA impact. Nevertheless, the City will impose its Standard Conditions of Approval to reduce greenhouse gas emissions.

3.7.8 REFERENCES

AECOM, 2011. OGTIC Solar Power Capacity. December.

California Air Resources Board, 2011. *California Greenhouse Gas Inventory 2000 to 2009*. December.

California Energy Commission, 2007. *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 - Final Staff Report*, publication # CEC-600-2006-013-SF, Sacramento, CA. December 22, 2006; and January 23, 2007, update to that report.

California Environmental Protection Agency, 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature.* March.

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U.S. Environmental Protection Agency, 2012. *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2010*. February.

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3.8 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential hazards and hazardous materials impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant hazards and hazardous materials impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant hazards and hazardous materials impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.8.1 PRIOR ANALYSIS AND CONCLUSIONS

3.8.1.1 2002 EIR Impact Findings

The 2002 EIR concluded potentially significant impacts related to hazardous materials in buildings, near schools, in and around ASTs and USTs, and contaminated soil and groundwater, which could be reduced to less-than-significant levels:

Impact 4.7-2: Hazardous or acutely hazardous materials (AHMs) may be handled or emitted within ¼ mile of an existing or proposed school. *[Note: This impact is not applicable to the 2012 Project.]*

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 4.7-6: Workers and others could be exposed to LBP in buildings, ACM or PCBs during demolition, remediation, renovation and site work activities.

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.

Impact 4.7-8: Workers or others could experience direct contact exposure to LBP contaminated soil, concrete, and pavement surrounding buildings that have LBP.

Impact 4.7-10: During interim or future use of existing buildings, people could be exposed to ACM or other environmental hazards.

Impact 4.7-11: Workers could be exposed to polychlorinated biphenyls (PCB) and PCB-contaminated equipment during remediation, construction and future operations.

The 2002 EIR concluded that the 2002 Project would have a less-than-significant impact on routine use or accidental release of hazardous materials, routine generation and management of hazardous waste, worker exposure to lead, asbestos or polychlorinated biphenyls (PCBs):

> **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.
>
> **Impact 4.7-9:** Workers or others, or the environment could be exposed to lead, asbestos or PCBs through off-site transport of soil and building materials from demolition and construction.

Potential hazards due to seismic events and flooding are discussed in Sections 3.6, Geology and Soils, and, 3.9, Hydrology and Water Quality, respectively.

3.8.1.2 2002 EIR Mitigation Measures

The 2002 EIR identified 17 mitigation measures (Mitigation Measures 4.7-1 through 4.7-17) to address the eight potential impacts summarized above. Some mitigation measures from the 2002 EIR will not be required for the 2012 Project because certain elements of the project area have been modified and/or remediated (a school no longer exists within a ¼ mile of the project site, the measures applied to areas outside the 2012 Project site, and PCB contaminated transformers have been removed from the project area). Consequently, Mitigation Measures 4.7-1, 4.7-2, 4.7-10, 4.7-14, and 4.7.15, which are listed below, are no longer applicable to the 2012 Project.

> **Mitigation Measure 4.7-1:** For use of hazardous materials within ¼ mile of an existing or proposed school, business operators shall prepare Business Plan, update annually, and keep on file with the Oakland Fire Department. *[Note: This mitigation measure applies to Impact 4.7-2; a school no longer exists with the project site]*.
>
> **Mitigation Measure 4.7-2:** For use of AHMs within ¼ mile of an existing or proposed school, in addition to a Business Plan, business operators shall prepare, implement, and update a Risk Management and Prevention Plan (RMPP) on at least an annual basis. *[Note: This mitigation measure applies to Impact 4.7-2; a school no longer exists with the project site).*
>
> **Mitigation Measure 4.7-10:** For the remainder of the redevelopment project area (non-OARB 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. *[Note: This mitigation measure applies to Impact 4.7-7; the non-OARB area is not part of the project site.]*
>
> **Mitigation Measure 4.7-14:** For the remainder of the redevelopment project area (non-OARB areas), any building that has not been surveyed for ACM but potentially contains

ACM shall be surveyed to determine whether ACM is present prior to demolition, renovation or reuse. *[Note: This mitigation measure applies to Impact 4.7-10; the non-OARB area is not part of the project site).*

Mitigation Measure 4.7-15: Known PCB transformers or PCB-contaminated transformers at the OARB shall be removed, monitored and/or maintained in accordance with applicable laws and regulations. *[Note: This mitigation measure applies to Impact 4.7-11; all PCB contaminated transformers have been removed from the project site.]*

The following mitigation measures remain applicable to the proposed project:

Mitigation Measure 4.7-3: Implement RAP/RMP as approved by DTSC, and if future proposals include uses not identified in the Reuse Plan and incorporated into the RAP/RMP, or if future amendments to the remediation requirements are proposed, obtain DTSC and City approval.

Mitigation Measure 4.7-4: For the project areas not covered by the DTSC-approved 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 of Oakland ULR Program and other applicable laws and regulations.

Mitigation Measure 4.7-6: Buildings and structures constructed prior to 1978 slated for demolition or renovation that have not previously been evaluated for the presence of LBP shall be sampled to determine whether LBP is present in painted surfaces, and the safety precautions and work practices as specified in government regulations shall be followed during demolition.

Mitigation Measure 4.7-7: Buildings, structures and utilities that have not been surveyed for ACM, shall be surveyed to determine whether ACM is present prior to demolition or renovation, and the safety precautions and work practices as specified in government regulations shall be followed during demolition.

Mitigation Measure 4.7-8: Buildings and structures proposed for demolition or renovation shall be surveyed for PCB-impacted building materials, and the safety precautions and work practices as specified in government regulations shall be followed during demolition.

Mitigation Measure 4.7-9: For above-ground and underground storage tanks (ASTs/USTs) on the OARB, implement the RAP/RMP.

Mitigation Measure 4.7-11: For LBP-impacted ground on the OARB, implementation of RAP/RMP to be approved by DTSC as part of the project will result in avoidance of this potentially significant impact. For the remainder of the development project area, sampling

shall be performed on soil or paved areas around buildings that are known or suspected to have LBP, and the safety precautions and work practices specified in government regulations shall be followed.

Mitigation Measure 4.7-12: The condition of identified ACM shall be assessed annually, and prior to reuse of a building known to contain ACM.

Mitigation Measure 4.7-13: No future tenancies shall be authorized at the OARB for use categories that are inconsistent with the Reuse Plan without an updated environmental analysis and DTSC approval as provided for in the RAP/RMP.

Mitigation Measure 4.7-16: Oil-filled electrical equipment in the redevelopment project area that has not been surveyed shall be investigated prior to the equipment being taken out of service to determine whether PCBs are present.

Mitigation Measure 4.7-17: PCB-containing or PCB-contaminated equipment taken out of service shall be handled and disposed in compliance with applicable laws and regulations.

3.8.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

Mitigation Measures 4.7-6, 4.7-7 and 4.7-8 for assessment of LBP, ACM and PCB, where not already completed, are reiterated in SCA HAZ-5: Lead-Based Paint/Coatings, Asbestos, or PCB Occurrence Assessment with additional details regarding the required process. SCA HAZ-8: Health and Safety Plan per Assessment, SCA HAZ-6: Lead-based Paint Remediation, and SCA HAZ-4: Asbestos Removal in Structures provide additional details regarding the required process in the event LBP, ACM and/or PCBs are discovered. SCA HAZ-7: Other Materials Classified as Hazardous Waste would become applicable if other materials classified as hazardous waste are discovered during the assessment process above (assuming they are not already covered in the RAP/RMP). All applicable SCA are listed below.

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 Best Management Practices (BMPs) regarding potential soil and groundwater hazards.

a) Soil generated by construction activities shall be stockpiled onsite in a secure and safe 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 Regional Water Quality Control Board (RWQCB) and/or the Alameda County Department of Environmental Health (ACDEH) and policies of the City of Oakland.

b) Groundwater pumped from the subsurface shall be contained onsite 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 of Oakland, the RWQCB and/or the ACDEH. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building (pursuant to the Standard Condition of Approval 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 of Oakland, written verification that the appropriate federal, state or county oversight authorities, including but not limited to the RWQCB and/or the ACDEH, have granted all required clearances and confirmed that the all applicable standards, regulations and conditions for all previous contamination at the site. The applicant also shall provide evidence from the City's Fire Department, Office of Emergency Services, indicating compliance with the Standard Condition of Approval requiring a Site Review by the Fire Services Division pursuant to City Ordinance No. 12323, and compliance with the Standard Condition of Approval requiring a Phase I and/or Phase II Reports.

SCA HAZ-2: Hazards Best Management Practices
Prior to commencement of demolition, grading, or construction

The project applicant and construction contractor shall ensure that construction of Best Management Practices (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 underground storage tanks, 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 Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

SCA HAZ-3: Hazardous Materials Business Plan
Prior to issuance of a business license

The project applicant shall submit a Hazardous Materials Business Plan 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 Hazardous Materials Business Plan 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 Hazardous Materials Business Plan 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.

SCA HAZ-4: Asbestos Removal in Structures
Prior to issuance of a demolition permit

If asbestos-containing materials (ACM) are found to be present in building materials to be removed, demolished and disposed of, the project applicant shall submit specifications signed by a certified asbestos consultant for the removal, encapsulation, or enclosure of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations, Title 8; Business and Professions Code; Division 3; California Health & Safety Code 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended.

SCA HAZ-5: Lead-Based Paint/Coatings, Asbestos, or PCB Occurrence Assessment
Prior to issuance of any demolition, grading or building permit

The project applicant shall submit a comprehensive assessment report to the Fire Prevention Bureau, Hazardous Materials Unit, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACM), lead-based paint, and any other building materials or stored materials classified as hazardous waste by State or federal law.

SCA HAZ-6: Lead-based Paint Remediation
Prior to issuance of any demolition, grading or building permit

If lead-based paint is present, the project applicant shall submit specifications to the Fire Prevention Bureau, Hazardous Materials Unit signed by a certified Lead Supervisor, Project Monitor, or Project Designer for the stabilization and/or removal of the identified lead paint in accordance with all applicable laws and regulations, including but not necessarily limited to: Cal/OSHA's Construction Lead Standard, 8 CCR1532.1 and DHS regulation 17 CCR Sections 35001 through 36100, as may be amended.

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.

SCA HAZ-8: Health and Safety Plan per Assessment
Prior to issuance of any demolition, grading or building permit

If the required lead-based paint/coatings, asbestos, or PCB assessment finds presence of such materials, the project applicant shall create and implement a health and safety plan to protect workers from risks associated with hazardous materials during demolition, renovation of affected structures, and transport and disposal.

3.8.3 UPDATED REGULATORY SETTING

The 2002 EIR was certified before the transfer process for the Oakland Army Base was completed. The OARB was transferred to the City under a Finding of Suitably for Early Transfer (FOSET), which included requirements for site remediation. The California Hazardous Substances Account Act (HSAA, California Health & Safety Code 34 § 25300 *et seq.*), which is similar to the Comprehensive Environmental Responsibility, Compensation, and Liability Act (CERCLA), authorizes the Cal/EPA Department of Toxic Substances Control (DTSC) to order and/or oversee the clean up contaminated sites and hazardous substances releases. The DTSC has oversight of the remediation required at the OARB. DTSC must review and approve remediation proposed for the OARB pursuant to the requirements of the HSAA, including referenced requirements that are also imposed under CERCLA. In particular, DTSC was required to review and approve a Remedial Action Plan/Risk Management Plan (RAP/RMP). The RAP/RMP was completed and approved by DTSC on September 27, 2002. It defines the remediation goals, establishes remediation actions and describes health protective measures. The remedy selection process contained in the RAP/RMP is consistent with the process defined in the NCP under CERCLA. As described in Section 3.8.4, below, the RAP/RMP has largely been implemented, and areas requiring remediation are scheduled to be completed by August 2013.

The 2002 EIR discussed the applicable federal, state, and local regulations associated with the project. Since the 2002 EIR, the Safety Element of the Oakland General Plan was adopted in November 2004. The Safety Element contains the following hazardous materials policies relevant to the project (City of Oakland 2004):

- Policy HM-1: Minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage and disposal of hazardous materials.
- Policy HM-2: Reduce the public's exposure to toxic air contaminants through appropriate land use and transportation strategies.
- Policy HM-3: Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the city's capacity to respond to such incidents.

No other applicable regulations or policies have been updated.

3.8.4 EXISTING CONDITIONS

This subsection provides an update of the site conditions relative to the conditions existing at the time of the 2002 EIR.

The Project site is located in an urban industrial setting, and was the site of hazardous materials use and releases in the past. A RAP/RMP for the former OARB has been reviewed and approved by DTSC. The RAP/RMP defines the target risk-based or applicable and relevant remediation goals for use during and after redevelopment of the OARB and establishes the remedial actions for identified and reasonably anticipated locations where releases have occurred that necessitate response when compared with the agency-approved remediation goals. The RAP/RMP approach adopted by OBRA, consistent with the City of Oakland Urban Land Redevelopment (ULR) Program and other applicable requirements, allows for the phasing of the investigation and remediation of "low threat sites" referred to as Risk Management Plan Locations at the OARB to coincide with implementation of planned infrastructure upgrades and redevelopment activities.

The goal of the RAP/RMP was to integrate remediation with the redevelopment program to assure that the investigation and remediation of RMP Locations were fully addressed in conjunction with planned redevelopment uses. While the integrated approach would have allowed for substantial economies of scale in completing subsurface earthwork activities for remediation purposes in tandem with site excavation and grading work needed for redevelopment, delays in the redevelopment process and limitations on the availability of funding to complete remediation in the future led to the City's decision to proceed with remediation of RMP Locations prior to redevelopment (see Figure 3.8-1). The Project area includes 7 identified RAP sites and 159 RMP Locations where hazardous materials are known to occur and where remediation will be required. Five RAP sites and 121 RMP Locations have already been remediated and closed, and 11 RMP Locations have been remediated and are awaiting formal closure approval by DTSC. An additional 13 RMP Locations are currently being investigated and/or remediated. Remediation is scheduled to be completed prior to August 2013.

All PCB contaminated transformers have been removed from the project area. All identified ASTs/ USTs in the project area have been removed with the exception of 5 UST sites for which investigation/follow-up sampling is currently in progress. All identified UST sites in the project area have been completed. Closure from the RWQCB, which regulates fuel tank sites, may still be pending for some sites due to lack of funding for regulatory oversight from the Army. The Army has conducted LBP and ACM surveys for most of the buildings in the project area. However, the quality of the surveys is sometimes not sufficient for current standards. Often, updated surveys are needed to proceed with demolition work. Several buildings have already been demolished in the project area. If the existing surveys were insufficient, updated surveys were preformed prior to demolition.

3.8.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

Legend:

- Planned Development Area Boundary
- Former Oakland Army Base Boundary
- Economic Development Coveyance ("EDC") Area or RMP Implementation Area
- Subaru Lot (Former BRAC Parcels 6 and 7)
- FHWA/Caltrans Property
- Former US Army Reserve Properties (Former BRAC Parcels 18, 19, and 21)
- Former BRAC Parcel 1

RAP Site Status (Labeled)

- Completed
- Pending Completion
- In Progress
- Not Evaluated

RMP Location Status

- Completed
- In Progress
- Not Evaluated

Abbreviations:

BRAC = Base Realignment and Closure
FHWA = Federal Highway Administration
RMP = Risk Management Plan

Notes:

1. All locations are approximate.
2. Aerial Photograph Source: Port of Oakland Archive, dated 2-25-02.

LSA

FIGURE 3.8-1

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FEET

2012 Oakland Army Base Project
Status of RMP/RAP

SOURCE: ERLER & KALINOWSKI, INC., APRIL 2012.

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c) Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors;

d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

e) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the "Cortese List") and, as a result, would create a significant hazard to the public or the environment;

f) Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions;

g) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area;

h) Be located within the vicinity of a private airstrip, and would result in a safety hazard for people residing or working in the project area;

i) Fundamentally impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

j) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

These criteria are discussed below.

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Consistent with the conclusions of the 2002 EIR, impacts related to routine transport, use, or disposal of hazardous materials would be less than significant. Implementation of SCA HAZ-1 and SCA HAZ-2 would serve to further reduce and avoid potential impacts, consistent with current City of Oakland practices. SCA HAZ-1 requires contractors to implement Best Management Practices. SCA HAZ-2 requires preparation of a HMBP, which would ensure compliance with applicable state and local requirements. A fueling station that may be a biodiesel is proposed for the North Gateway area of the site. The station would be installed and operated in compliance with all state regulatory requirements and county standards. A recycling facility proposed for the site will include a re-melting furnace. This unit would be relocated from its existing location and is fully permitted. Emissions from the furnace operation are abated via an after burner and bag house systems to ensure compliance with federal and State regulatory requirements. Potential impacts associated with the furnace are addressed in Section 3.3, Air Quality.

As discussed below under criterion e, the former OARB is an active site listed on the hazardous waste site list commonly referred to as the Cortese list. Remediation is occurring pursuant to an approved RAP/RMP, and management of hazardous materials used during remediation and any hazardous

waste generated as a result of remediation is subject to the City's contracts which require compliance with applicable laws.

There are no changes in the project, changes in circumstances, or new information that would result in a new significant effect related to routine transport, use, or disposal of hazardous materials, or a substantial increase in the severity of previously identified environmental effects related to routine transport, use, or disposal of hazardous materials.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Consistent with the conclusions of the 2002 EIR, impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials would be less than significant. Implementation of SCA HAZ-1, SCA HAZ-2 and SCA HAZ-3 would serve to further reduce and avoid potential impacts, consistent with current City of Oakland practice. There are no changes in the project, changes in circumstances, or new information that would result in new significant effect related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials, or a substantial increase in the severity of previously identified environmental effects related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted (Implementation of SCA HAZ-1, SCA HAZ-2 and SCA HAZ-3 would further reduce and avoid potential impacts)

Significance After Implementation: Less Than Significant (No New Impact)

c) Would the project create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors?

This criterion was not addressed in the 2002 EIR. The 2012 Project includes two options (Variant A and Variant B) for open space and public access along the Wharf 7 shoreline in the western portion of the West Gateway area previously identified for the Gateway Park. Variant A proposed a total of 2.5 acres of open space while Variant B proposes 9.8 acres. This proposed open space is consistent with the proposed redevelopment of the area described in the 2002 EIR. Implementation of SCA HAZ-2,

Hazardous Materials Business Plan, and SCA HAZ-1, Hazards Best Management Practices, would reduce any hazards to the public through the storage or use of acutely hazardous materials near sensitive receptors to a less-than-significant level.

2002 Impact: The 2002 EIR did not address this impact.

2012 Impact: Less Than Significant

2002 Mitigation: The 2002 EIR did not address this impact.

2012 Mitigation: No Mitigation Warranted (Implementation of SCA HAZ-1 and SCA HAZ-2 would reduce any potential hazards to a less-than-significant level.)

Significance After Implementation: Less Than Significant

d) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Several public and private schools are located within the West Oakland neighborhood, east of the project area, including PLACE@ Prescott, Prescott Development Center, Bunche Continuation School, Lafayette Elementary School, West Oakland Middle School, McClymonds High School, KIPP Bridge Charter School, Pentecostal Way of Truth Academy, St. Martin De Porres Catholic School, and Head Start. However, none of these schools are within a quarter-mile radius of the project site, and no schools are planned for the site. The 2012 Project would not result in a significant impact related to hazardous emissions and hazardous materials near schools.

2002 Impact: Less Than Significant

2012 Impact: No Impact

2002 Mitigation: 2002 EIR Mitigation Measures 4.7-1 and 4.7-2 *[Note: These mitigation measures are not applicable to the 2012 Project.]*

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

e) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the "Cortese List") and, as a result, would create a significant hazard to the public or the environment.

The 2012 Project is located on a site listed on the Cortese List. A RAP/RMP for the former OARB has been reviewed and approved by DTSC. The understanding of environmental conditions, establishment of remediation goals, and selection of remedial actions are described in the RAP. The RMP is a companion document to the RAP. The RMP describes the health protective measures to be implemented in the future, during and after redevelopment, for identified chemical release sites, land uses and potential exposure pathways. The use of a RMP is typically included in Brownfields projects where commercial/industrial uses are planned – like those for the OARB. The RMP includes obligations on property owners and tenants to always perform the measures prescribed in the document to mitigate potential exposures to residual (previously unknown) contamination in soil or groundwater. The

property owner must also update information and modify the measures in the RMP based on whether changes in conditions are encountered, or if changes in property use, statutes, or available chemical toxicity information occur. For the OARB, there are both RAP sites and RMP Implementation Area categories.

Due to the change in the redevelopment schedule, remediation of the property has preceded redevelopment. All RAP sites, with the exception of two, have been remediated. Approximately 75 percent of the RMP Locations have been remediated and are considered complete. An additional 15 percent are either pending approval for closure from DTSC or in progress of being investigated and/or remediated. Ten RMP Locations have yet to be evaluated.

Storm drain lines and sanitary sewer lines are anticipated to be upgraded as part of the 2012 Project (see Initial Study Section 3.17, Utilities). Storm drain lines and sewer lines are considered "categorical" RMP Locations. The standard RAP/RMP protocols apply to the categorical RMP locations, but they are only applied when the categorical RMP Location (see Figure 3.8-1) is encountered during subsurface work. In other words, if storm drain or sewer lines are exposed during subsurface construction, an environmental representative would observe and determine whether or not the soil surrounding the line appeared contaminated. If contamination is suspected, the appropriate procedures would be followed. If the lines are not exposed, then RAP/RMP protocols would not apply. The lines would be managed in place as part of the deed restrictions in the Covenant To Restrict Use of Property (CRUP). The 2002 EIR Mitigation Measures 4.7-3, 4.7-4, 4.7-5, 4.7-9, and 4.7-11 will continue to apply to any construction activities involving subsurface intrusion.

Wick drains are proposed for the project area to accelerate consolidation of Bay Muds underneath building foundations and other sensitive facilities. Wick drains consist of perforated pipes installed to depths of 35 to 75 feet below ground surface to collect groundwater forced upward by the surcharging process. Water collected by the wick drains would be tested and treated, if necessary, following already established RAP/RMP protocols. The collected water would then be disposed of at an appropriate facility that handles such effluent.

Implementation of the RAP/RMP and Mitigation Measures 4.7-3, 4.7-6 through 4.7-9, 4.7-11, and 4.7-15 through 4.7-17 and SCA HAZ-4 through HAZ-8 would reduce any hazards to the public or the environment to a less-than-significant level.

There are no changes in the project, changes in circumstances, or new information that would result in a new significant effect on the public or the environment related to the site being included on the Cortese List, or a substantial increase in the severity of previously identified effects related to the site being included on the Cortese List.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.7-3 through 4.7-9, 4.7-11 through 4.7-13, 4.7-16, and 4.7-17

2012 Mitigation: 2002 EIR Mitigation Measures 4.7-3 through 4.7-9, 4.7-11 through 4.7-13, 4.7-16, and 4.7-17, supplemented with SCA HAZ-4 through SCA HAZ-8

Significance After Implementation: Less Than Significant (No New Impact)

f) Would the project result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions;

Similar to the 2002 Project, roads and site circulation would be improved compared to the current conditions. The site would be designed to accommodate trucks and other large vehicles. Redesigning roads as proposed would not result in an emergency access hazard. For further analysis of potential traffic-related safety impacts, see Threshold "c" within Section 3.16, Transportation/Traffic in this document.

2002 Impact: No Impact

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact (No New Impact)

g) Would the project be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area?

The project site is located more than two miles from the Oakland International Airport. Thus, the redevelopment of the area would not result in a safety hazard for construction workers or people working in or utilizing the project area in the future.

2002 Impact: The 2002 EIR did not address this impact.

2012 Impact: No Impact

2002 Mitigation: The 2002 EIR did not address this impact.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

h) Would the project be located within the vicinity of a private airstrip, and would result in a safety hazard for people residing or working in the project area?

The project is not located within the vicinity of a private airstrip. Thus the redevelopment of the project area would not result in a safety hazard for construction workers or people working in or utilizing the project area in the future.

2002 Impact: The 2002 EIR did not address this impact.

2012 Impact: No Impact

2002 Mitigation: The 2002 EIR did not address this impact.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

i) Would the project fundamentally impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The 2002 EIR addressed emergency access routes in Section 4.3, Transportation and Traffic. Impact 4.3-4 states that due to site constraints, it may not be possible to provide two emergency access routes to the western portion of the Gateway development area, which would be in excess of 1,000 feet from the nearest major arterial. With implementation of Mitigation Measure 4.3-8, this impact would be reduced to a less-than-significant level. As described in Section 3.16, Transportation and Traffic, of this Addendum, while the final site plan has not yet been developed, emergency access routes to most of the site and adjacent properties appear to be reasonably well-served. To ensure emergency access is appropriately provided, Mitigation Measure 3.16-15, development of an emergency response plan for the 2012 Project, has been included.

2002 Impact: Less Than Significant (see Section 4.3, Transportation and Traffic)

2012 Impact: Potentially Significant

2002 Mitigation: Mitigation Measure 4.3-8

2012 Mitigation: 2002 EIR Mitigation Measure 4.3-8 and Mitigation Measure 3.16-15a and 3.16-15b

Significance After Implementation: Less Than Significant (No New Impact)

j) Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

There are no wildlands on-site or adjacent to the site.

2002 Impact: The 2002 EIR did not address this impact.

2012 Impact: No Impact

2002 Mitigation: The 2002 EIR did not address this impact.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

3.8.6 CUMULATIVE IMPACTS

The 2002 EIR concluded that potential cumulative impacts related to hazards and hazardous materials would be less than significant, and that remediation of contamination at multiple locations over time would result in a beneficial effect. Since the 2002 EIR, significant progress towards the investigation and remediation of RAP sites and RMP locations has been made. Approximately 75 percent of the RAP/RMP sites have been remediated with an additional 15 percent awaiting closure or are currently being investigated and/or remediated. Thus the potential for cumulatively significant impacts has decreased relative to the level described in the 2002 EIR. Compliance with existing applicable regulations, RAP/RMP protocols, SCA, and applicable mitigation measures would limit human exposure to hazardous materials as described in the above sections, and cumulative impacts would remain less than significant. The 2012 Project would not result in or contribute to any significant cumulative hazards or hazardous materials impacts.

3.8.7 CONCLUSIONS

The implementation of the 2012 Project would not result in significant new hazards or hazardous materials impacts or an increase in severity of previously identified hazards or hazardous materials compared to the 2002 EIR. The amount of contamination described in the 2002 EIR has decreased as a result of site-wide remediation. Thus, the impacts would be similar to or even less than those addressed in the previous document, and would continue to be less than significant. Previously imposed mitigation measures from the 2002 EIR have been reviewed and, where appropriate, have been clarified, refined, revised, or deleted. Two new mitigation measures, Mitigation Measures 3.16-15a and 3.16-15b relating to emergency response are further discussed in Section 3.16, Transportation/Traffic. Applicable provisions of the City's Standard Conditions of Approval have also been identified in this section. Redevelopment of the Project site along with continuing remediation would result in a cumulative environmental benefit to the overall redevelopment area and vicinity.

3.8.8 REFERENCES

Arniola, Mark, 2012. Public Works Agency, City of Oakland. Email communication regarding RAP-RMP Summary Information. February 15.

Lamphier-Gregory, 2009. *Initial Study/Addendum for the Central Gateway Aggregate Recycling and Fill Project*. October.

Oakland, City of, 2002. *Draft Environmental Impact Report for the Oakland Army Base Area Redevelopment Plan,* Volume 1. Main Text. April.

Oakland, City of, 2004. *Oakland General Plan Safety Element*. November.

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3.9 HYDROLOGY AND WATER QUALITY

This section evaluates the potential hydrology and water quality impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant hydrology and water quality impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant hydrology and water quality impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.9.1 PRIOR ANALYSIS AND CONCLUSIONS

The 2002 EIR provided the hydrology and water quality analysis in two separate sections: Chapter 4.14, *Groundwater* and Chapter 4.15, *Surface Water*.

3.9.1.1 2002 EIR Impact Findings

The 2002 EIR concluded potentially significant impacts related to operation of wells, in-water construction or remediation, sediment and pollutant loads to receiving waters, groundwater contamination, water quality, and localized flooding, which could be reduced to less-than-significant levels.

Impact 4.14-1: Operation of wells could cause saltwater to intrude into shallow groundwater.

Impact 4.14-2: Operation of wells could cause contaminants to migrate to uncontaminated groundwater.

Impact 4.15-1: In-water construction or remediation would increase turbidity, and could release contaminants, affecting water quality.

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 4.15-5: Use of recycled water for non-potable purposes could lead to degradation of surface water quality.

Impact 4.15-6: New construction could result in changes in localized flooding.

The 2002 EIR concluded that the 2002 Project would have a less-than-significant impact on reduction of available groundwater and potential inundation by seiche or tsunami:

Impact 4.14-3: Reduction in available groundwater.

Impact 4.15-7: Potential inundation by seiche or tsunami.

3.9.1.2 2002 EIR Mitigation Measures

For the potential impacts related to in-water construction, the 2002 EIR identified the following mitigation measures to reduce impacts to a less-than-significant level:

> **Mitigation Measure 4.15-1:** Prior to in-water construction, the contractor shall prepare a water quality protection plan acceptable to the RWQCB, including site-specific best management practices for protection of Bay waters, and shall implement this plan during construction.
>
> **Mitigation Measure 4.15-2:** Contractors and developers shall comply with all permit conditions from the RWQCB, Corps, and BCDC.

For the potential impacts related to disturbance of soils during construction the 2002 EIR identified the following mitigation measure to reduce impacts to a less-than-significant level:

> **Mitigation Measure 4.15-3:** Prior to ground-disturbing activities, the contractor shall develop and implement a Stormwater Pollution Prevention Plan to be reviewed by the City or the Port, including erosion and sediment control measures. *[Note: This mitigation measure is superseded by SCA HYD-1, SCA HAZ-1, and SCA GEO-1, which more completely address the Stormwater Pollution Prevention Plan, soil and groundwater hazards, and erosion and sedimentation control.]*

For the potential impacts related to encountering contaminated shallow groundwater during construction or remediation the 2002 EIR identified the following mitigation measures to reduce impacts to a less-than-significant level:

> **Mitigation Measure 4.15-4:** Prior to construction or remediation, the contractor shall develop and implement a Stormwater Pollution Prevention Plan, including protocols for determining the quality and disposition of construction water, which includes shallow groundwater encountered during construction/remediation; depending on the results of the testing, contaminated water shall be disposed of via standards of the applicable regulatory agency (RWQCB, DTSC, or EBMUD), as appropriate. In addition, the contractor shall comply with the requirements of NPDES Permit Nos. CAG912002 and CAG912003 if appropriate. *[Note: This mitigation measure is superseded by SCA HYD-1, SCA HAZ-1, and SCA GEO-1, which more completely address the Stormwater Pollution Prevention Plan, soil and groundwater hazards, and erosion and sedimentation control.]*

For the potential impacts related to net changes in impervious surfaces the 2002 EIR identified the following mitigation measure to reduce impacts 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.

For the potential impacts related to use of recycled water the 2002 EIR identified the following mitigation measure to reduce impacts to a less-than-significant level:

Mitigation Measure 4.15-6: Site-specific design and best management practices shall be implemented to prevent runoff of recycled water to receiving waters.

For the potential impact related to localized flooding the 2002 EIR identified the following mitigation measures to avoid the impact:

Mitigation Measure 4.15-7: New development shall conform with policies of the City of Oakland's Comprehensive Plan Environmental Health Hazards Element regarding flood protection. *[Note: The OARB sub-district is not included on FEMA flood hazard maps in the 2002 EIR or the 2012 IS/Addendum. Therefore, this mitigation measure does not apply to the 2012 Project.]*

Mitigation Measure 4.15-8: The City and the Port shall complete flood hazard mapping in the project area, where necessary and applicable, to delineate 100- and 500-year flood hazard zones. *[Note: The OARB sub-district is not included on FEMA flood hazard maps in the 2002 EIR or the 2012 IS/Addendum. Therefore, this mitigation measure does not apply to the 2012 Project.]*

For the potential impacts related to operation of wells causing saltwater intrusion the 2002 EIR identified the following mitigation measure to reduce impacts to a less-than-significant level:

Mitigation Measure 4.14-1: Installation of groundwater extraction wells into the shallow water-bearing zone or Merritt Sand aquifer for any purpose other than construction de-watering or remediation, including monitoring shall be prohibited.

For the potential impacts related to operation of wells causing migration of contaminants the 2002 EIR identified the following mitigation measure to reduce impacts to a less-than-significant level:

Mitigation Measure 4.14-2: Extraction of groundwater for construction de-watering or remediation, including monitoring shall be minimized where practicable; if extraction will penetrate into the deeper aquifers, then a study shall be conducted to determine whether contaminants of concern could migrate into the aquifer; if so, extraction shall be prohibited in that location.

3.9.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as

requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

SCA HYD-1: Stormwater Pollution Prevention Plan (SWPPP)
Prior to and ongoing throughout demolition, grading, and/or construction activities

The project applicant must obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the State Water Resources Control Board (SWRCB). The project applicant must file a notice of intent (NOI) with the SWRCB. The project applicant will be required to prepare a stormwater pollution prevention plan (SWPPP) and submit the plan for review and approval by the Building Services Division. At a minimum, the SWPPP shall include a description of construction materials, practices, and equipment storage and maintenance; a list of pollutants likely to contact stormwater; site-specific erosion and sedimentation control practices; a list of provisions to eliminate or reduce discharge of materials to stormwater; Best Management Practices (BMPs), and an inspection and monitoring program. Prior to the issuance of any construction-related permits, the project applicant shall submit to the Building Services Division a copy of the SWPPP and evidence of submittal of the NOI to the SWRCB. Implementation of the SWPPP shall start with the commencement of construction and continue though the completion of the project. After construction is completed, the project applicant shall submit a notice of termination to the SWRCB.

SCA HYD-2: Post-Construction Stormwater Management Plan
Prior to issuance of building permit (or other construction-related permit)

The applicant shall comply with the requirements of Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) permit issued to the Alameda Countywide Clean Water Program. The applicant shall submit with the application for a building permit (or other construction-related permit) a completed Construction-Permit-Phase Stormwater Supplemental Form to the Building Services Division. The project drawings submitted for the building permit (or other construction-related permit) shall contain a stormwater management plan, for review and approval by the City, to manage stormwater run-off and to limit the discharge of pollutants in stormwater after construction of the project to the maximum extent practicable.

a) The post-construction stormwater management plan shall include and identify the following:
   i. All proposed impervious surface on the site;
   ii. Anticipated directional flows of on-site stormwater runoff; and
   iii. Site design measures to reduce the amount of impervious surface area and directly connected impervious surfaces; and
   iv. Source control measures to limit the potential for stormwater pollution;
   v. Stormwater treatment measures to remove pollutants from stormwater runoff; and
   vi. Hydromodification management measures so that post-project stormwater runoff does not exceed the flow and duration of pre-project runoff, if required under the NPDES permit.

b) The following additional information shall be submitted with the post-construction stormwater management plan:
   i. Detailed hydraulic sizing calculations for each stormwater treatment measure proposed; and
   ii. Pollutant removal information demonstrating that any proposed manufactured/mechanical (i.e., non-

landscape-based) stormwater treatment measure, when not used in combination with a landscape-based treatment measure, is capable or removing the range of pollutants typically removed by landscape-based treatment measures and/or the range of pollutants expected to be generated by the project.

All proposed stormwater treatment measures shall incorporate appropriate planting materials for stormwater treatment (for landscape-based treatment measures) and shall be designed with considerations for vector/mosquito control. Proposed planting materials for all proposed landscape-based stormwater treatment measures shall be included on the landscape and irrigation plan for the project. The applicant is not required to include on-site stormwater treatment measures in the post-construction stormwater management plan if he or she secures approval from Planning and Zoning of a proposal that demonstrates compliance with the requirements of the City's Alternative Compliance Program.

Prior to final permit inspection

The applicant shall implement the approved stormwater management plan.

SCA HYD-3: Maintenance Agreement for Stormwater Treatment Measures
Prior to final zoning inspection

For projects incorporating stormwater treatment measures, the applicant shall enter into the "Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement," in accordance with Provision C.3.e of the NPDES permit, which provides, in part, for the following:

i. The applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and
ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The agreement shall be recorded at the County Recorder's Office at the applicant's expense.

SCA HYD-4: Stormwater and Sewer
Prior to completing the final design for the project's sewer service

Confirmation of the capacity of the City's surrounding stormwater and sanitary sewer system and state of repair shall be completed by a qualified civil engineer with funding from the project applicant. The project applicant shall be responsible for the necessary stormwater and sanitary sewer infrastructure improvements to accommodate the proposed project. In addition, the applicant shall be required to pay additional fees to improve sanitary sewer infrastructure if required by the Sewer and Stormwater Division. Improvements to the existing sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in infiltration/inflow to offset sanitary sewer increases associated with the proposed project. To the maximum extent practicable, the applicant will be required to implement Best Management Practices to reduce the peak stormwater runoff from the project site. Additionally, the project applicant shall be responsible for payment of the required installation or hook-up fees to the affected service providers.

SCA GEO-1: Erosion and Sedimentation Control
(Please refer to Section 3.6, Geology and Soils.)

SCA HAZ-1: Best Management Practices Soil and Groundwater Hazards
(Please refer to Section 3.8, Hazards and Hazardous Materials.)

SCA HAZ-2: Hazards Best Management Practices
(Please refer to Section 3.8, Hazards and Hazardous Materials.)

3.9.3 UPDATED REGULATORY SETTING

The most substantive changes in the hydrology and water quality regulatory setting that have occurred since the 2002 EIR was certified are related to updates to the USEPA-approved 303(d) list, which identifies impaired water bodies. The current effective USEPA-approved 303(d) list is the 2008–2010 list approved on November 10, 2010 (USEPA 2010). Within the project area, beneficial uses of San Francisco Bay are identified as being impaired by mercury and polychlorinated biphenyls (PCBs). The San Francisco Bay RWQCB has established two separate Total Maximum Daily Loads (TMDLs) to address excessive mercury and PCBs in the San Francisco Bay (described below).

San Francisco Bay TMDL for Mercury. In 2004, the San Francisco Bay RWQCB amended the *Water Quality Control Plan, San Francisco Bay Region* (Basin Plan) to establish mercury TMDL and implementation plan for San Francisco Bay (Resolution No. R2-2004-0082). The San Francisco Bay Mercury TMDL identifies sources of mercury, including runoff from historic mines, urban runoff, wastewater discharges, atmospheric deposition, and resuspension of historic deposits of mercury-laden sediment already in San Francisco Bay. The San Francisco Bay Mercury TMDL allocates allowable loads to each source. Specific numeric targets are established to protect beneficial uses, such as sport fishing, human health, wildlife and rare and endangered species, fish tissue and bird egg targets, among others. To meet numeric targets significant reductions to current and future mercury sources will need to be achieved. The San Francisco Bay Mercury TMDL is implemented using an adaptive management approach. As such, immediate actions were taken based on available information and the approach is adapted as new information becomes available. In 2006, the San Francisco Bay RWQCB amended the Basin Plan to establish new mercury water quality objectives and to amend the TMDL and Implementation Plan for mercury in San Francisco Bay (Resolution No. R2-2006-0052). In 2007, the San Francisco Bay RWQCB amended the Basin Plan to establish mercury fish tissue objectives and establish a TMDL for mercury in San Francisco Bay (Resolution No. 2007-0045). Water quality objectives are often managed through NPDES permits. For instance, the NPDES Municipal Regional Permit for all municipal stormwater programs in the Bay Area requires all mercury-related control measures and wasteload allocations required by the TMDL for stormwater sources.

San Francisco Bay TMDL for PCBs. In 2008, the San Francisco Bay RWQCB amended the Basin Plan to establish a TMDL and implementation plan for PCBs in the San Francisco Bay (Resolution No. R2-2008-0012). PCBs were manufactured in the United States and widely used from the late 1920s through the 1970s. They are of particular concern because they are toxic, persist in the environment, and accumulate in the tissue of fish, wildlife and humans. The San Francisco Bay PCBs TMDL is 10 kilograms per year (kg/yr) and represents the assimilative capacity of the Bay. The PCBs TMDL necessitates achieving a load reduction of about 24 kg/yr (2008/2009) to reduce total PCBs in the Bay active layer to 160 kg in about 30 years. External sources of PCBs include direct atmospheric deposition, sediment discharged to the bay from Central Valley watersheds, municipal and industrial wastewater discharges, and urban and non-urban stormwater runoff. The TMDL is allocated among existing external sources, and a portion is allocated to potential future municipal and industrial wastewater and stormwater discharges. Wasteload allocations apply to all NPDES permitted discharges to the Bay, including municipal and industrial wastewater dischargers, and municipal stormwater (urban and non-urban stormwater runoff) discharges. The total wasteload allocation for stormwater runoff is 2

kg/yr. Internal sources (within the Bay [e.g., active sediment layer]) of PCBs also exist, but are not assigned load allocations.

San Francisco Bay Plan. In October 2011, the San Francisco Bay Plan was updated to address the expected impacts of climate change in the San Francisco Bay. Sea level rise risk assessments are required within BCDC's jurisdiction (100-foot shoreline band) when planning shoreline areas or designing larger shoreline projects. If sea level rise and storms that are expected to occur during the life of the project would result in public safety risks, the project must be designed to cope with flood levels expected by mid-century (2050). If it is likely that the project will remain in place longer than mid-century, the applicant must have a plan to address the flood risks expected at the end of the century.

City of Oakland General Plan, Safety Element. The City of Oakland General Plan, Safety Element was updated in November 2004. The Safety Element contains the following policy and actions related to the proposed project:

- Policy FL-1**:** Enforce and update local ordinances, and comply with regional orders that would reduce the risk of storm-induced flooding.
    - Action FL-1.3: Comply with all applicable performance standards pursuant to the 2003 Alameda countywide National Pollutant Discharge Elimination System municipal stormwater permit that seek to manage increases in stormwater runoff flows from new-development and redevelopment construction projects.
    - Action FL-1.4: Continue to enforce the grading, erosion and sedimentation ordinance by prohibiting the discharge of concentrated stormwater flows by other than approved methods.

City of Oakland Draft Energy and Climate Action Plan. The City of Oakland issued its Draft Energy and Climate Action Plan on March 1, 2011. This plan discusses impacts of climate change that are already starting to be observed, including sea-level rise. The plan also identifies priority actions to explore adaptation strategies to ensure that impacts of climate change are minimized, as follows:

> The City will continue to develop capacity around climate adaptation and resilience by exploring relevant issues with local partners and other experts. Where possible, the City will collaborate with local organizations such as BCDC, the Pacific Institute, Climate Bay Area, and other local governments, to develop a better understanding of projected local impacts of climate change and how those impacts will affect Oakland and strategies for moving forward to advance climate adaptation and increase community resilience. The City will monitor and advise major climate adaptation efforts of neighboring cities and entities operating within city boundaries as resources permit with consideration of impacts to Oakland neighborhoods and infrastructure. The City will also collaborate with other local governments to advocate for consideration of urban issues and coastal city issues in the context of regional adaptation discussions. Existing resources will enable the City to participate in occasional meetings of ongoing regional climate adaptation discussions.

Clean Water Program Alameda County (formerly Alameda Countywide Clean Water Program), C.3 Stormwater Technical Guidance (C.3 Handbook). The C.3 Handbook was issued on August 31, 2006, and updated in 2010 and 2011, by the Clean Water Program Alameda County as

part of the Alameda County municipal stormwater National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit requires participating municipalities, including the City of Oakland, to issue requirements for post-construction stormwater control. The C.3 Handbook assists developers, builders and project sponsors as they include post-construction stormwater controls in their projects in order to meet local municipal requirements.

3.9.4 EXISTING CONDITIONS

The project area is located at the Oakland Harbor adjacent to the San Francisco Bay. Stormwater from the project site is currently discharged to the San Francisco Bay. New information on existing conditions at the project site is available related to flood hazard mapping, anticipated future sea level rise, and mapping of tsunami inundation areas. Other than the information presented immediately below, existing regional and local setting information in the 2002 EIR related to hydrology and water quality has not substantially changed.

3.9.4.1 FEMA Flood Hazard Mapping

For the 2002 EIR, information was not available regarding mapped flood hazards in the project area. Since the 2002 EIR, information of flood hazards has been developed. The Federal Emergency Management Agency (FEMA) completed flood hazard mapping of the project area in 2009. The project site is not mapped as being within an area subject to flooding hazards from a 100-year storm event.[97]

3.9.4.2 Sea Level Rise

The San Francisco Bay Conservation and Development Commission (BCDC) has recently completed an analysis of potential sea level rise in the San Francisco Bay. No information on anticipated future sea level rise was provided in the 2002 EIR. BCDC projects that by 2050, approximately 16 inches of sea level rise will occur within the San Francisco Bay; and by 2100, approximately 55 inches of sea level rise will occur within the San Francisco Bay.[98]

3.9.4.3 Tsunami Inundation Areas

Since the 2002 EIR new tsunami inundation mapping has been completed for the project area. The California Department of Conservation (CDC) has also published updated tsunami inundation mapping of the project area. Updated CDC mapping indicates that the entire project site is located within a tsunami inundation area.[99] The CDC mapped tsunami inundation area does not represent inundation from a single scenario event. It was created by combining inundation results for a series of source events affecting a given region. As such, the entire inundation area would not likely be inundated during a single tsunami event. Comparison of updated CDC tsunami inundation maps with United

[97] Federal Emergency Management Agency, 2009. *Flood Insurance Rate Map, California*. Alameda County, City of Oakland. Website: hazards.fema.gov/wps/portal/mapviewer (accessed February 16, 2012). August 3.

[98] San Francisco Bay Conservation and Development Commission, 2011. *Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline.* Website: www.bcdc.ca.gov/BPA/LivingWithRisingBay.pdf (accessed February 16, 2012). Revised October 6.

[99] California Department of Conservation, 2009. *Tsunami Inundation Map for Emergency Planning, Oakland West Quadrangle.* Prepared by: California Emergency Management Agency, California Geological Survey, and University of Southern California. Website: www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Alameda/Documents/Tsunami_Inundation_OaklandWest_Quad_Alameda.pdf, (accessed February 24, 2012). July 31.

States Geologic Survey topographic maps (1992) indicates the upper boundary of the tsunami inundation area within the immediate project area is approximately equivalent to contour line representing an elevation of 10 feet above mean sea level.

The tsunami inundation area delineated in the CDC maps is much greater than other available estimates of tsunami inundation for the project area. The City of Oakland General Plan (General Plan) has also been updated since the 2002 EIR was circulated. The General Plan indicates that the portion of the project site west of Maritime Street is subject to tsunami run-up (equivalent to a tsunami inundation). Other commonly accepted (earlier) calculations of tsunami run-up in the San Francisco Bay near the project area range from 4.7 to 5.5 feet above mean sea level.[100] In conclusion, comparison of available information on tsunami inundation indicates that 2009 CDC mapping presents a very conservative scenario of potential tsunami inundation at the project site.

3.9.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Violate any water quality standards or waste discharge requirements;

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);

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

d) Result in substantial flooding on- or off-site;

e) Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems;

f) Create or contribute substantial runoff which would be an additional source of polluted runoff;

g) Otherwise substantially degrade water quality;

h) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows;

i) Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

j) Expose people or structures to a substantial risk of loss, injury or death involving flooding;

k) Result in inundation by seiche, tsunami, or mudflow;

l) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or off-site; or

m) Fundamentally conflict with elements of the City of Oakland Creek Protection (OMC Chapter

[100] Houston, J.R., and A.W. Garcia, 1975. *Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound, Technical Report H-75-17*. November.

13.16) ordinance intended to protect hydrologic resources. Although there are no specific, numeric/ quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of water quality through (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water or capacity; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) substantially endangering public or private property or threatening public health or safety.

These criteria are discussed below.

a) Would the project violate any water quality standards or waste discharge requirements?

In-Water Construction

The 2012 Project includes removal of the majority of the existing stormwater drainage system and development of a new stormwater drainage system (see Figure 3.9-1). Construction of new twin 54-inch outfall pipes would occur along the San Francisco Bay shoreline at Berth 10. As described in Section 3.4, Biological Resources, to construct the new twin 54-inch outfall pipes with tidal gates would require trenching, and bulkhead stabilization at the existing shoreline. To execute this construction work, dewatering would be necessary. A cofferdam would be build out of sheet piles to dewater the area to facilitate placement of culverts, tidal gates and bulkhead stabilization.

In-water construction activities would consist of installation of the sheet pile cofferdam. Once the cofferdam is installed and the area within the cofferdam dewatered, construction of the twin outfalls would occur outside of the water. The only other in-water construction activities expected to occur as a part of the 2012 Project are routine repairs to Wharves 7 and 6½.[101,102]

In-water construction has the potential to create minor amounts of turbidity by introducing sediments during installation of the sheet pile coffer dam and/or release of sediments from disturbance of the bay bottom, from construction equipment or driving of the pile sheets into the bay bottom. Disturbance and release of sediments could also introduce other contaminates associated with sediments. This impact is considered potentially significant.

The 2012 Project includes in-water construction activities similar to those considered in the 2002 Project. In-water construction associated with the 2012 Project would not result in any new or more significant impacts to water quality than were described in the 2002 EIR. With implementation of Mitigation Measures 4.15-1 and 4.15-2 in the 2002 EIR, this impact would be reduced to a less-than-significant level.

[101] Wharves 7 and 6½ (also known as Berths 7 and 8, respectively) were evaluated to determine the extent of necessary repairs (and their associated cost) for their continued use as a working waterfront. The wharves have deteriorated over the past 60 years; however, the studies have shown that with routine repair the structures can continue to support the bulk shipping and rail uses.

[102] Jacobs, 2010. Preliminary Conditions Assessment and Evaluation of Army Wharves 6½ and 7. Prologis/CCIG has selected Option 1/Limited Action is the proposed use and as such only repairs for safety and maintenance would be required.

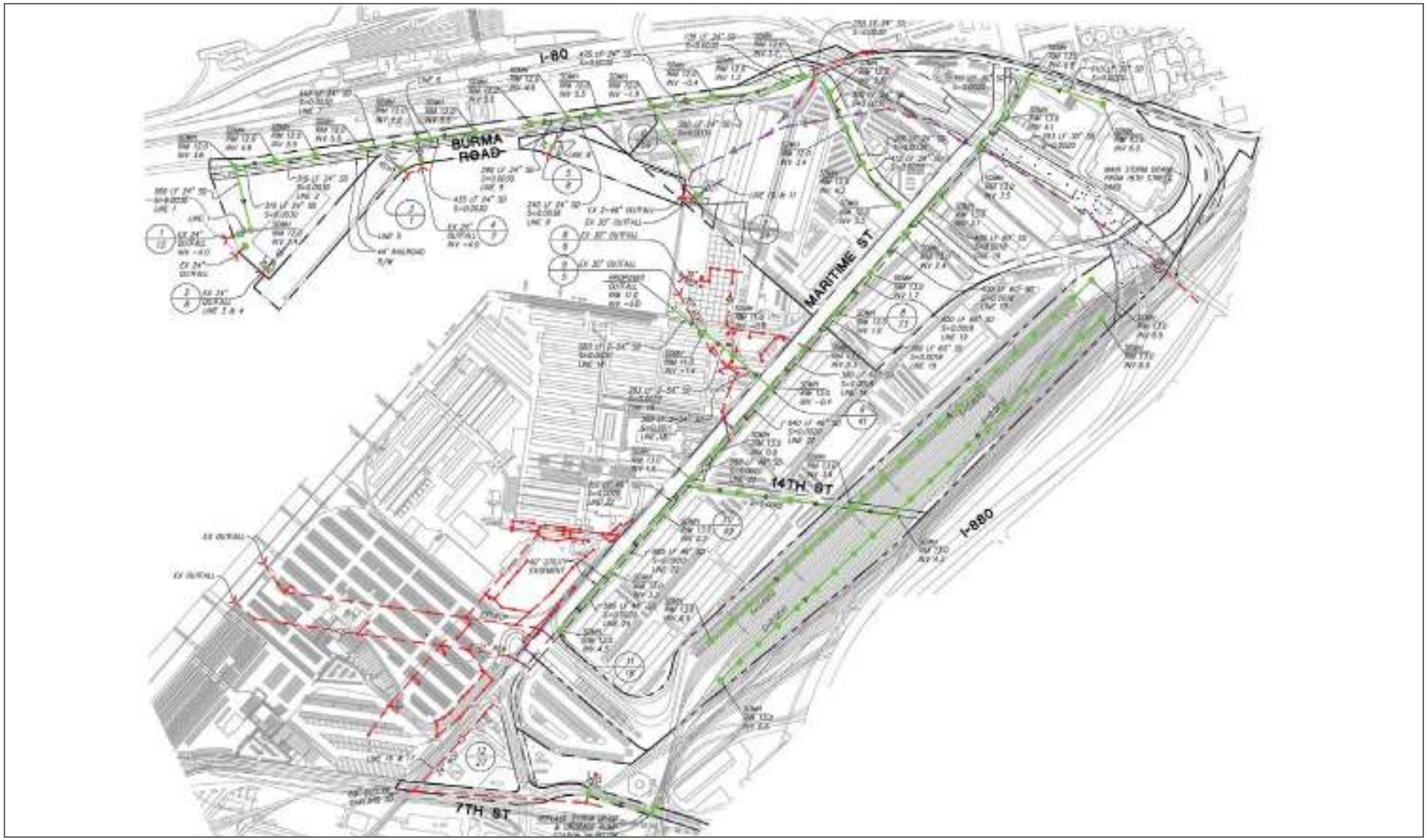

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FIGURE 3.9-1

PROPOSED STORM DRAIN LINE
EXISTING STORM DRAIN LINE TO BE UPGRADED
PROPOSED STORM DRAIN STRUCTURE
24" RCP
PIPE SIZE AND MATERIAL
EXISTING STORM DRAIN LINE TO REMAIN
EXISTING STORM DRAIN OUTFALL TO REMAIN
PROPOSED STORM DRAIN OUTFALL
AREA ID
ACRES

N

0 600 1200
FEET

SOURCE: RUGGERI-JENSEN-AZAR, 2011.

2012 Oakland Army Base Project
Backbone Storm Drain Plan

I:\COO1001 Oakland Gateway\figures\Fig_3.9-1.ai (3/27/12)

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2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-1 and 4.15-2

2012 Mitigation: 2002 EIR Mitigation Measures 4.15-1 and 4.15-2

Significance After Implementation: Less Than Significant (No New Impact)

Encountering Shallow Groundwater During Construction

During construction shallow groundwater may be encountered that could be contaminated with sediment or chemicals. Discharge of contaminated groundwater to receiving waters (i.e., San Francisco Bay) could impair water quality.

Surcharging of soils at the project site would involve extraction of shallow groundwater from the project site. Extracted groundwater would be collected, treated and disposed of following already established protocols defined by the Remedial Action Plan accompanying the Risk Management Plan (as discussed in Chapter 2, Project Description). However, there is still the potential for extracted shallow groundwater to be discharged to receiving waters. Shallow groundwater is not expected to be encountered during construction activities occurring after the surcharging process is complete.

City of Oakland SCA HAZ-1 would be implemented throughout demolition, grading, and construction activities. Implementation of SCA HAZ-1 would provide additional procedures to contain extracted groundwater and likely prevent discharge of extracted groundwater to receiving waters. As a result, this impact is considered less than significant.

Encountering shallow groundwater during construction would not result in any new or more significant environmental impacts than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-4

2012 Mitigation: No Mitigation Warranted; Mitigation Measure 4.15-4 is superseded by SCA HYD-1 and SCA HAZ-1

Significance After Implementation: Less Than Significant (No New Impact)

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted)?

The project does not propose the development or use of any wells for groundwater supplies. Site preparation would alter existing local groundwater conditions. Site preparation involves the process of deep dynamic compaction, import of soil, surcharging the project site and wicking of groundwater.

The deep dynamic compaction and surcharging and processes would condense the underlying soils. During the surcharging process numerous wick drains (vertical perforated pipes) would extract shallow groundwater from the project site, resulting in a lowering of the groundwater table. The depth of wick drains ranges from 35 to 75 feet. The groundwater table would only be lowered beneath the project site.

After the site preparation process described above, condensed soil conditions beneath the project site would prohibit liquid intrusion and likely prevent or reduce the natural horizontal flow of groundwater. As a result, the majority of groundwater would likely be impeded and would either be redirected around the project site or the groundwater level would increase at the area of impediment. A small amount of groundwater could still flow beneath the project site.

Lowering of groundwater levels could occur in areas down-gradient from where groundwater flows are interrupted. However, since the project site is located on the San Francisco Bay shoreline, interruption of groundwater flowing towards the ocean would not affect groundwater table below any land uses. In conclusion, it is anticipated adverse affects to other groundwater users would not occur or would be negligible. The production rate of any pre-existing nearby wells would not decrease.

Affects to groundwater table levels associated with the 2012 Project would not result in any new or more significant impacts to groundwater than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

c) Would the project result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters?

Disturbance of soils during construction activities could result in erosion and mobilization of sediment, which could increase sediment loads discharged to receiving waters (i.e., San Francisco Bay).

The 2012 Project involves the demolition of existing buildings and infrastructure, import of a large quantity of soil, surcharging and grading activities, development of a new drainage plan, and future industrial development of the site. Use of a variety of construction techniques and equipment types could result in erosion and/or mobilization of sediment.

City of Oakland SCA GEO-1 would be implemented prior to and throughout grading activities and SCA HAZ-1 and SCA HYD-1 would be implemented throughout demolition, grading, and construction activities. Implementation of these SCA would control erosion and sediment during construction activities, contain contaminated soils, and minimize pollutants in stormwater. As a result, this impact is considered less than significant.

Disturbance of soils during construction activities would not result in any new or more significant environmental impacts than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-3 and 4.15-4

2012 Mitigation: No Mitigation Warranted; Mitigation Measures 4.15-3 and 4.15-4 are superseded by SCA HYD-1, SCA HAZ-1, and SCA GEO-1

Significance After Implementation: Less Than Significant (No New Impact)

d) Would the project result in substantial flooding on- or off-site?

The project site is situated along the San Francisco Bay shoreline but is not located within a FEMA-designated 100-year flood hazard area.[103] Therefore, the 2012 Project does not have the potential to redirect flood flows during a 100-year storm event. As discussed in the 2002 EIR, the project area is not near any surface drainage channels and is therefore not subject to flooding from over-bank spillage.

The 2002 EIR identified that some localized flooding occurs at the project site due to problems with the existing stormwater drainage system. Specifically, soil subsidence has created pipe separations, reverse flows, and shallow ponding areas. Some localized flooding has been corrected with new catch basins and inlets. However, flooding appears to still occur, primarily as a result of outfalls located below the tide level.

The 2012 Project includes removal of the majority of the existing stormwater drainage system and development of a new stormwater drainage system on the project site, as well as construction of a new outfall along the San Francisco Bay shoreline at Berth 10 (see Figure 3.9-1). The new storm-water drainage system would redirect much of the site drainage to a new system, rather than continue drainage through the Port's Berths 20-24 marine terminals. The existing stormwater drainage system has reached its useful life and must be reconfigured to accommodate the new site layout. The existing stormwater drainage system is relatively low when compared to forecasted sea level rise and changes in the design criteria for new stormwater drainage systems. Through raising the site and improving drainage, the 2012 Project would reduce localized flooding at the project site compared to existing conditions.

The San Francisco Bay Conservation and Development Commission (BCDC) sea level index map for the Central Bay area projects a 16-inch sea level rise by mid-century. The projection is published in the report *Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline*, approved by BCDC on October 6, 2011. BCDC adopted the recommendation of the Report in Resolution No 11-8, Adoption of Bay Plan Amendment No. 1-08. BCDC's regulatory authority is limited to 100 feet landward of the mean high tide. BCDC encourages local agencies, including the City of Oakland, to adopt similar sea rise standards.

[103] Federal Emergency Management Agency, 2009. *Flood Insurance Rate Map, California*. Alameda County, City of Oakland. Website: hazards.fema.gov/wps/portal/mapviewer (accessed February 16, 2012). August 3.

To date, the City of Oakland has not officially adopted the 16-inch sea level rise parameter within drainage standards. However, they have stated that the BCDC sea level rise should be included in design calculations. The Living with a Rising Bay Report anticipates a 16-inch sea level rise by "mid-century" with a 55-inch sea level rise by "end of century". For the project analyses, the 16-inch rise was added to the FEMA 100-year water tide (9 feet), or the mean higher high water tide (6.1 feet), and used as the basis of determining the starting water surface elevation or hydraulic grade line (HGL) in these hydraulic calculations. This impact is considered less than significant.

To the extent that the site work in the North Gateway area, including rail lines, results in creating a "berm-like" facility adjacent to EBMUD that may result in flooding, the City shall work with EBMUD to remedy the problem.

No new or more significant impacts would occur related to flooding than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-7 and 4.15-8 *[Note: These mitigation measures are not applicable to the 2012 Project.]*

2012 Mitigation: Mitigation Measure 3.9-1: The City shall coordinate and consult and if necessary design and build storm drain improvements resulting from increased elevation of the North Gateway area.

Significance After Implementation: Less Than Significant (No New Impact)

e) Would the project create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems?

The 2012 Project includes removal of the majority of the existing stormwater drainage system and development of a new stormwater drainage system (see Figure 3.9-1). The new drainage system has been designed following the City of Oakland standards, including for starting surface water elevation of design features of the facilities. The starting water elevation is the height above sea level that surface water would be at during different storm event frequencies. Determining the water surface elevation helps determine the elevation for placement of drainage facilities. An additional 16 inches was added to the surface water elevation to account for expected sea level rise by 2050. (Further discussion of planning for sea level rise at the project site is provided in significance criteria.) The new stormwater system could manage stormwater runoff from the project site up to the following storm events:

- Primary Facilities (50 acres or more): A 25-year storm event occurring at the same time as the tide from a 100-year storm event (plus 16 inches of sea level rise)
- Secondary Facilities (less than 50 acres): A 10-year storm event occurring at the same time as the tide from a 100-year storm event (plus 16 inches of sea level rise)

The new stormwater drainage system has capacity to manage stormwater runoff from the project site during the vast majority of storms. Runoff from the project site could also be managed during storm

events with anticipated sea level rise of 16 inches by 2050. It would not be feasible for stormwater drainage systems to be designed to manage runoff from every possible storm event, specifically, very large, rare storm events. Therefore, due to the extreme infrequency of catastrophic storm events, this impact is considered less than significant. In addition, SCA HYD-2 requiring a post-construction stormwater management plan, SCA HYD-3 requiring a maintenance agreement for stormwater treatment measures, and SCA HYD-4 requiring confirmation of the stormwater system capacity would further reduce impacts to the stormwater drainage system.

2002 Impact: No Impact

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA HYD-2 through HYD-4 would further reduce impacts to the stormwater drainage system

Significance After Implementation: Less Than Significant (No New Impact)

f) Would the project create or contribute substantial runoff which would be an additional source of polluted runoff?

Development of the 2012 Project would change (increase or decrease) impervious surfaces at the project site. Increases in impervious surfaces have the potential to result in additional stormwater runoff, higher velocities, and larger pollutant loads being conveyed to receiving waters.

After development of the 2012 Project, sources of stormwater runoff from the project site would be similar to existing sources of runoff from the project site. Sources of stormwater runoff are primarily associated with impervious surfaces including: parking lots, roads, railways, warehouses and other shipping/transportation type industrial facilities. Currently (at the time this Initial Study was prepared), several large buildings have been demolished southeast of Maritime Street and north of 7th Street. Much of the land formerly occupied by these buildings has been remediated as part of the RAP/RMP and is currently vacant (see Figure 3.8-1, Status of RMP/RAP). Most sites have been repaved, with the remaining areas soon to be restored to previously existing impervious/paved surfaces as part of the RAP/RMP, and therefore, are considered temporary. For the purposes of this analysis these areas are considered impervious because of their historic and intended future use. When compared to the baseline conditions in the 2002 EIR, the amount of impervious surface would be similar or decreased with implementation of the 2012 Project.

Under the 2012 Project, the stormwater drainage plan is designed to meet current state and local retention and filtration requirements. The drainage plan was prepared consistent with the Alameda County Clean Water Program Handbook Version 2.1 (ACCWP 2010). Accordingly, more than 4 percent of the project's impervious area is designed as filtration (bioretention) areas (see Figure 3.9-2). These bioretention areas will provide treatment of stormwater runoff throughout the project site, significantly reducing sediment and pollutant loads in runoff.

The portion of the Oakland Army Base owned by the City is currently covered under the San Francisco Bay Municipal Regional Stormwater NPDES Permit. The portion of the Oakland Army Base owned by the Port is listed to be permitted in the Draft Tentative Order for Waste Discharge

Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (SWRCB 2011). Depending on site-specific operations and practices within the project site, additional Industrial Storm Water General Permits may be required. Additional BMPs or SWPPPs to reduce pollutants in stormwater runoff would likely be required as part of any stormwater or water quality permits related to use of the project site.

Since the total amount of impervious surfaces at the project site may increase compared to existing conditions, and NPDES permits have not yet been obtained for the project site, this impact is considered potentially significant.

The 2012 Project includes changes in impervious surfaces similar to that considered in the 2002 Project. Changes in impervious surfaces associated with the 2012 Project would not result in any new or more significant impacts to water quality than were described in the 2002 EIR. With implementation of SCA HYD-1, HYD-2, HYD-3, and GEO-1, along with Mitigation Measure 4.15-5 in the 2002 EIR, this impact would be reduced to a less-than-significant level.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-5

2012 Mitigation: 2002 EIR Mitigation Measures 4.15-5, supplemented with SCA HYD-1 through SCA HYD-3 and SCA GEO-1

Significance After Implementation: Less Than Significant (No New Impact)

g) Would the project otherwise substantially degrade water quality?

Use of Recycled Water

Recycled water would be used at the project site for evaporative cooling and landscape irrigation purposes. The stormwater system will include grassy swales to provide biological treatment and sediment removal from stormwater runoff. These grassy swales require irrigation during dry periods, and recycled water is proposed for these sites. An estimated 4 percent of the site will be used for stormwater treatment. For temperature controlled buildings, evaporative cooling with recycled water may be included. Recycled water would be allowed to evaporate, absorbing heat as it evaporates, and cooling the surrounding air. Runoff of recycled water applied for landscape irrigation purposes to receiving waters (i.e., San Francisco Bay) could result in water quality impairment. Recycled water would be used in compliance with Title 22 of the California Code of Regulations (Title 22). Accordingly, Title 22 does not allow runoff of recycled water to surface waters. Since management of recycled water applied for landscape irrigation at the project site is not currently known, this impact is considered potentially significant. Surface drainage within the landscape zones, irrigated by recycled water, will be designed such that no overland flow release will directly enter the piped drainage system.

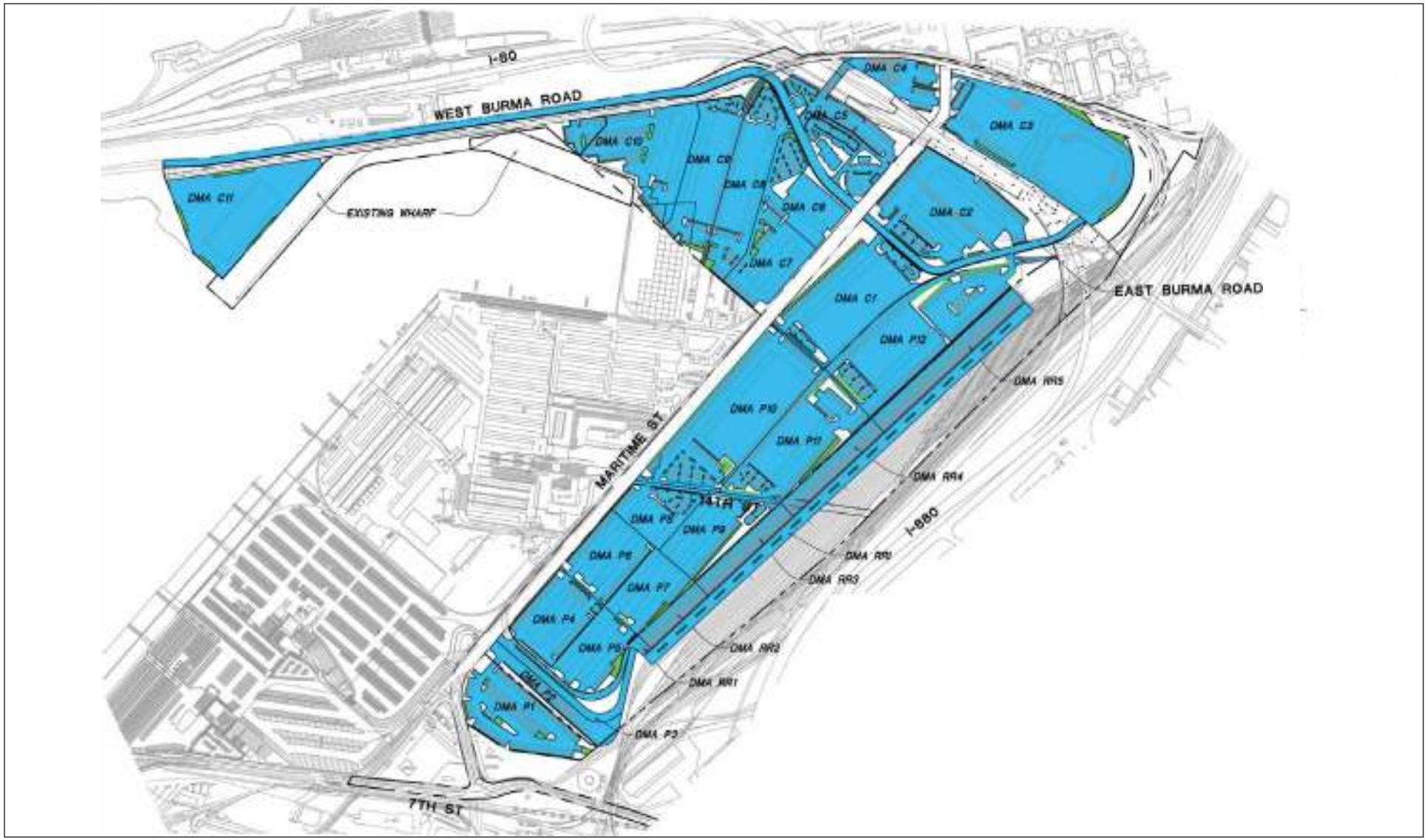

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FIGURE 3.9-2

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IMPERVIOUS SURFACE

BIORETENTION AREA

SOURCE: RUGGERI-JENSEN-AZAR, 2011.

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2012 Oakland Army Base Project
Storm Water Management Plan

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The 2012 Project includes use of recycled water similar to that considered in the 2002 Project. Use of recycled water associated with the 2012 Project would not result in any new or more significant impacts to water quality than were described in the 2002 EIR. With implementation of Mitigation Measure 4.15-6 in the 2002 EIR this impact would be reduced to a less-than-significant level.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.15-6

2012 Mitigation: 2002 EIR Mitigation Measure 4.15-6

Significance After Implementation: Less Than Significant (No New Impact)

Groundwater Quality

Surcharging of soils at the project site would involve extraction of shallow groundwater from the project site and condensing soil beneath the project site. Groundwater would be extracted from depths ranging from 35 to 70 feet. Extraction of shallow groundwater could result in local groundwater depressions. After surcharging of the project site, condensed soil conditions beneath the project site would likely prevent or reduce the natural horizontal flow of groundwater. As a result, the majority of groundwater would likely be impeded and would either be redirected around the project site or the groundwater level would increase at the area of impediment. A small amount of groundwater could still flow beneath the project site.

Groundwater depressions could draw saltwater into the aquifer (creating brackish or saline areas) or cause contaminates in groundwater to migrate to areas where contamination has not previously been detected.

Since shallow groundwater extraction during project construction would create a depression and surcharging of the project site would likely change local groundwater flows, this impact is considered potentially significant.

The 2012 Project includes the potential for extraction of shallow groundwater to result in migration of saltwater or other contaminants similar to that considered in the 2002 Project. Potential migration of saltwater and other contaminates from the 2012 Project would not result in any new or more significant impacts to water quality than were described in the 2002 EIR. With the implementation of Mitigation Measures 4.14-1 and 4.14-2 in the 2002 EIR this impact would be reduced to a less-than-significant level.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.14-1 and 4.14-2

2012 Mitigation: 2002 EIR Mitigation Measures 4.14-1 and 4.14-2

Significance After Implementation: Less Than Significant (No New Impact)

h) Would the project place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows?

The project site is not located within a FEMA-designated 100-year flood hazard area.[104] Therefore, the 2012 Project does not have the potential to redirect flood flows during a 100-year storm event. Further, no housing is proposed as part of the 2012 Project. No new or more significant impacts would occur related to flooding than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-7 and 4.15-8 *[Note: These mitigation measures are not applicable to the 2012 Project.]*

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

i) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

The project site is not located within a FEMA-designated 100-year flood hazard area.[105] Therefore, the 2012 Project does not have the potential to redirect flood flows during a 100-year storm event. No new or more significant impacts would occur related to flooding than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-7 and 4.15-8 *[Note: These mitigation measures are not applicable to the 2012 Project.]*

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

j) Would the project expose people or structures to a substantial risk of loss, injury or death involving flooding?

The project site is situated along the San Francisco Bay shoreline but is not located within a FEMA-designated 100-year flood hazard area.[106] Therefore, the 2012 Project does not have the potential to redirect flood flows during a 100-year storm event. As discussed in the 2002 EIR, the project area is not near any surface drainage channels and is therefore not subject to flooding from over-bank spill-

[104] Ibid.

[105] Ibid.

[106] Ibid.

age. As discussed in criterion d) above, the 2012 Project would eliminate or reduce localized flooding at the project site compared to existing conditions. As discussed in criterion e) above, the new storm-water drainage system would have capacity to manage runoff from the project site during the vast majority of storm events. In conclusion, due to the infrequency of catastrophic storm events, the risk to people or structures from flooding at the project site is not considered significant.

The project site would potentially be subject to flooding in the future as a result of expected sea level rise. BCDC projects that by 2050 approximately 16 inches of sea level rise will occur within the San Francisco Bay, and by 2100 approximately 55 inches of sea level rise will occur within the San Francisco Bay. The project site is currently at low elevations due to years of settlement and an original design elevation that did not contemplate current drainage and sea level rise projections. For the 2012 Project, a large amount of soil would be imported to raise the project site to an elevation that accommodates the expected 16 inches of sea level rise by 2050. The project site, except for the new twin pipe outfall and existing outfalls that would be repaired, is located more than 100-feet from the San Francisco Bay shoreline. As such, the portions of the project site that could be impacted by sea level rise are located outside of BCDC's jurisdiction. Therefore, the project site is not subject to BCDC's requirements for protection from 16 inches of sea level rise by 2050, 55 inches of sea level rise in 2100, or preparation of a sea level rise risk assessment. However, the 2012 Project would still provide substantial flood protection compared to existing conditions by accommodating the expected 16 inches of sea level rise by 2050. The project site would be raised to a height of ranging from approximately 11 to 13 feet above mean sea level. As a result, with development of the 2012 Project, people or structures would not be exposed to risk from flooding associated with sea level rise.

No new or more significant impacts would occur related to flooding than were described in the 2002 EIR. Nonetheless, it is recommended that a Sea Level Rise Adaptation Plan be prepared for the 2012 Project and submitted to the City of Oakland for review and approval prior to implementation. This plan will show in detail how the project site accommodates projected sea level rise and improves existing conditions at the project site. Approval of the Sea Level Rise Adaptation Plan by the City of Oakland will further reduce this already less-than-significant impact.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-7 and 4.15-8 *[Note: These mitigation measures are not applicable to the 2012 Project.]*

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

Recommended Measure: A Sea Level Rise Adaptation Plan to be prepared for the 2012 Project and submitted to the City of Oakland for review and approval prior to implementation

k) Would the project result in inundation by seiche, tsunami, or mudflow?

As discussed in the existing conditions section above, several calculations have been made of the potential for tsunami inundation of the project site. Recent CDC mapping presents the most conserva-

tive estimates. CDC mapping indicates the entire project site is located within a tsunami inundation area.[107] The upper boundary of the tsunami inundation area within the immediate project area appears to be approximately equivalent to contour line representing an elevation of 10 feet above mean sea level.

The project site is currently at low elevations due to years of settlement and an original design elevation that did not contemplate current drainage and sea level rise projections. As part of the 2012 Project, a large amount of soil would be imported to raise the project site to an elevation that accommodates the expected 16 inches of sea level rise. (Further discussion of planning for sea level rise at the project site is provided in significance criteria.) The project site would be raised to a height ranging from approximately 11 to 13 feet above mean sea level.

The post-project elevation of the project site is anticipated to be sufficient to prohibit inundation by tsunami because the height would be greater than 10 feet above mean sea level. If the upper boundary of the tsunami inundation area in CDC mapping is greater than the estimated 10 feet above mean sea level, the post-project elevation of the project site is still anticipated to be sufficient to prohibit inundation by tsunami. With the anticipated 16 inches of sea level rise by 2050, the tsunami inundation height would also increase. Based on CDC mapping the height of a tsunami plus 16 inches of sea level rise is expected to be slightly greater than 11 feet. This scenario represents an extremely conservative estimate of tsunami inundation.

The post-project elevation of the project site is anticipated to be sufficient to prevent inundation from all conservative scenarios of tsunami inundation; however, slight inundation could potentially occur during the most extreme scenario (i.e., very conservative estimate of tsunami inundation plus sea level rise). It would not be feasible for project sites to be designed to prevent flooding from every possible event, specifically, very large, rare events. Therefore, due to the infrequency of catastrophic storm events, this impact is considered less than significant.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

l) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or off-site?

Refer to discussion for significance criteria d) and f) above.

[107] California Department of Conservation, 2009, op. cit.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-5, 4.15-7, and 4.15-8 *[Note: Mitigation Measures 4.15-7 and 4.15-8 are not applicable to the 2012 Project.]*

2012 Mitigation: 2002 EIR Mitigation Measures 4.15-5, supplemented with SCA HYD-1 through SCA HYD-3, and SCA GEO-1

Significance After Implementation: Less Than Significant (No New Impact)

m) Would the project fundamentally conflict with elements of the City of Oakland Creek Protection (OMC Chapter 13.16) ordinance intended to protect hydrologic resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of water quality through (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water or capacity; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) substantially endangering public or private property or threatening public health or safety?

Water bodies at the project site are limited to the San Francisco Bay shoreline. No other water bodies or channels are located at the project site. The City of Oakland Creek Protection Ordinance (CPO)[108] defines a creek as:

> "A watercourse that is a naturally occurring swale or depression, or engineered channel which carries fresh or estuarine water either seasonally or year round within the city boundaries, as identified on the "Watershed Map of Oakland and Berkeley Area" and the "Creek and Watershed Map of Hayward and San Leandro," published by the Oakland Museum of California and as modified by the city and/or any area identified through field investigation by the Environmental Services Manager as meeting the above criteria."
>
> The "Creek and Watershed Map of Oakland and Berkeley Area"[109] designates the project site as "Original Bay and Lakes," which is a separate designation from creeks. Further, certain physical features are required to classify a water body as a creek. The City of Oakland states a creek must include all of the following three physical features: 1) hydrologic connectivity; 2) presence of channel form; and 3) topographic position. A creek begins at the first point at which these features are met. Channel form is defined as "including a bed, bank, and features that indicate actual or potential sediment movement."[110] Waters in the project area do not have defined bed and bank features of a channel or creek. Hydrologic connectively is defined as, "hydrologically connected to a waterway above and below the site or is connected to a

[108] Oakland, City of. Municipal Code Section 13.16.030 B.

[109] Sowers, Janet M., 2000. Oakland Museum of California. *Creek and Watershed Map of Oakland and Berkeley.* Website: museumca.org/creeks/MapOak.html (accessed April 12, 2012).

[110] Oakland, City of, 2012. *Facilities and Environment, Permitting Guide*. Website: www2.oaklandnet.com/Government/o/PWA/o/FE/s/ID/OAK024749#what (accessed April 12, 2012).

spring, headwaters, lake, the Estuary, or the Bay."[111] This definition indicates that the San Francisco Bay itself is not a creek but can provide water to creeks.

In conclusion, waters in the project area are not defined as a creek by the Creek Protection Ordinance. This finding is consistent with the 2002 EIR findings that there are no creeks in or near the project area, and conditions do not exist that could cause a conflict with the City's Creek Protection Ordinance.

2002 Impact: No Impact

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

3.9.6 CUMULATIVE IMPACTS

Potential cumulative hydrology and water quality impacts are typically related to local and regional surface water bodies, such as San Francisco Bay, and groundwater conditions.

The 2002 EIR identified the San Francisco Bay, the receiving waters for the project site, as having cumulatively impaired water quality for CWA Section 303(d) list pollutants and toxics. The 2002 EIR also identified that increases in 303(d) list pollutants and toxics could represent a significant contribution to this impact. Since the 2002 EIR, the San Francisco Bay has been listed as impaired on the CWA Section 303(d) list, specifically for mercury and PCBs. Since the 2002 EIR, the San Francisco Bay RWQCB 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 San Francisco Bay. As such, stormwater runoff from the project site after implementation of the 2012 Project could increase mercury and PCBs in the San Francisco Bay. The 2012 Project could potentially result in a significant contribution to impairment of San Francisco Bay water quality. With implementation of Mitigation Measure 4.15-5 in the 2002 EIR, the 2012 Project's contribution to this impact would be reduced to a less-than-significant level.

There is no evidence that significant cumulative impacts currently exist relative to risk from flooding, tsunami, seiche, or excessive runoff. However, the 2002 EIR found that construction along with other nearby construction or remediation projects could substantially increase turbidity, resulting in a cumulative significant impact. The 2002 EIR also identified that increases in erosion and sedimentation/turbidity could represent a significant contribution to this impact. SCA GEO-1, HAZ-1, and HYD-1 would be implemented to reduce erosion and sedimentation for construction related soil disturbances. However, in-water construction activities associated with the 2012 Project would still have the potential to result in a significant contribution to increased turbidity in the San Francisco Bay. With implementation of Mitigation Measures 4.15-1 and 4.15-2 in the 2002 EIR, the 2012 Project's contribution to this impact would be reduced to a less-than-significant level.

[111] Ibid.

Local groundwater conditions are not anticipated to have significantly changed from those discussed in the 2002 EIR. As such, there is no evidence that significant cumulative impacts currently exist relative to depleted groundwater supplies. However, the 2002 EIR identified that concurrent operation of remediation or construction dewatering wells could result in migration of saltwater or other contaminates, resulting in a cumulative significant impact. The 2002 EIR also identified that increased migration of saltwater and contaminants from the 2012 Project could represent a significant contribution to this impact. As such, construction dewatering activities associated with the 2012 Project have the potential to result in a significant contribution to increased migration of saltwater and other contaminates in groundwater.

No new or more significant cumulative impacts would occur than were described in the 2002 EIR. In addition, the 2012 Project would not make any new contributions to any significant cumulative impacts other than those that were described in the 2002 EIR.

3.9.7 CONCLUSIONS

Redevelopment of the Oakland Army Base would not result in significant new impacts related to hydrology and water quality or a substantial increase in the severity of previously identified impacts related to hydrology and water quality compared to the 2002 EIR. Thus, impacts would be similar to those addressed in the 2002 EIR, and would continue to be less than significant. Previously imposed mitigation measures from the 2002 EIR have been identified and, where appropriate, have been clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's SCA. No new mitigation measures are required, although it is recommended that a Sea Level Rise Adaptation Plan be prepared, which will further reduce an already less-than-significant impact.

3.9.8 REFERENCES

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3.10 LAND USE AND PLANNING

This section evaluates the potential land use and planning impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant land use and planning impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant land use and planning impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.10.1 PRIOR ANALYSIS AND CONCLUSIONS

3.10.1.1 2002 EIR Impact Findings

The 2002 EIR concluded that: (1) there may be conflicts with existing plans or policies; and (2) there may be a potentially significant conflict between adjacent or nearby land uses, and specifically that dissimilar land uses may be located proximate to each other. The impacts identified in the 2002 EIR, which can be reduced to less-than-significant levels with mitigation measures, are listed below:

Impact 4.1-1: Fill to create fastland for New Berth 21 plus a nominal portion of the adjacent Gateway development area, and potential minor fill for Gateway Park shoreline stabilization may conflict with Bay Plan objectives and policies. *[Note: This impact is not applicable to the 2012 Project.]*

Impact 4.1-2: Proposed land uses in a portion of the 16th/Wood sub-district would be fundamentally inconsistent with Seaport and Bay plan Port Priority Use designations. *[Note: This impact is not applicable to the 2012 Project.]*

Impact 4.1-3: Loss of all structures contributing to a historic district, and loss of the district itself may conflict with Oakland General Plan Historic Preservation Element goals and policies.

Impact 4.2-1: Under proposed redevelopment, dissimilar land uses may be located proximate to one another.

3.10.1.2 2002 EIR Mitigation Measures

For potential conflicts with adopted plans and policies, the 2002 EIR identified the following mitigation measure:

> **Mitigation Measure 4.1-1:** Amend the Bay and Seaport plans to eliminate, where necessary, Port Priority Use designations within the 16th/Wood sub-district. *[Note: This mitigation measure is not applicable to the 2012 Project.]*

For potential conflicts with adjacent or nearby land uses, the 2002 EIR identified the following mitigation measures:

Mitigation Measure 4.2-1: The City shall ensure that Gateway development area redevelopment activities adjacent to Port of Oakland industrial maritime facilities are designed to minimize any land use incompatibilities to the extent feasible. *[Note: This mitigation measure is not applicable to the 2012 Project.]*

Mitigation Measure 4.2-2: If any land use incompatibility is subsequently identified, the Port of Oakland shall use its best efforts, consistent with meeting cargo throughput demand, to locate maritime activities that could result in land use incompatibilities as far away from the property boundary as feasible. *[Note: This mitigation measure is not applicable to the 2012 Project.]*

Mitigation Measure 4.2-3: The City and Port shall coordinate to implement Mitigation Measures 4.2-1 and 4.2-2. The City and Port shall cooperatively coordinate regarding the types of land uses to be developed at the coterminous boundary of their respective jurisdictions. *[Note: This mitigation measure is not applicable to the 2012 Project.]*

3.10.2 STANDARD CONDITIONS OF APPROVAL

There are no Standard Conditions of Approval relating to land use and planning policy that apply to this project.

3.10.3 UPDATED REGULATORY SETTING

Since adoption of the 2002 EIR, several State and local plans which guide land use development have been updated. The 2012 Project must comply with current regulations; a summary of updated regulations is presented below.

3.10.3.1 State/Regional

3.10.3.1.1 San Francisco Bay Plan

Developed by the San Francisco Bay Conservation and Development Commission (BCDC), the San Francisco Bay Plan[112] (Bay Plan) serves as a guide to protection and development of the San Francisco Bay and it s shoreline. Since its adoption in 1968, the Bay Plan has been updated several times, and has been updated since the 2002 EIR was certified.

The Bay Plan defines five special land use designations called "priority uses" that are appropriate at specific limited shoreline sites. These priority uses include ports, water-related industry, water-oriented recreation, airports, and wildlife refuges.

Water-related industry policies indentified in the Bay Plan include the following:

1. Sites designated for both water-related industry and port uses in the Bay Plan should be reserved for those industries and port uses that require navigable, deep water for receiving materials or shipping products by water in order to gain a significant transportation cost advantage.
2. Linked industries, water-using industries, and industries which gain only limited economic benefits by fronting on navigable water, should be located in adjacent upland areas. However,

[112] San Francisco Bay Conservation and Development Commission, 2008. *San Francisco Bay Plan.*

pipeline corridors serving such facilities may be permitted within water-related industrial priority use areas, provided pipeline construction and use does not conflict with present or future water-transportation use of the site.

3. Land reserved for both water-related industry and port use will be developed over a period of years. Other uses may be allowed in the interim that, by their cost and duration, would not preempt future use of the site for water-related industry or port use.

4. Water-related industry and port sites should be planned and managed so as to avoid wasteful use of the limited supply of waterfront land. The following principles should be followed to the maximum extent feasible in planning for water-related industry and port use:

   a. Extensive use of the shoreline for storage of raw materials, fuel, products, or waste should not be permitted on a long-term basis. If required, such storage areas should generally either be at right angles to the main direction of the shoreline or be as far inland as feasible, so other use of the shoreline may be made possible.

   b. Where large acreages are available, site planning should strive to provide access to the shoreline for all future plants and port facilities that might locate in the same area. (As a general rule, therefore, the longest dimension of plant sites should be at right angles to the shoreline.) Marine terminals should also be shared as much as possible among industries and port uses.

   c. Waste treatment ponds for water-related industry and port uses should occupy as little land as possible, be above the highest recorded level of tidal action, and be as far removed from the shoreline as possible.

   d. Any new highways, railroads, or rapid transit lines in existing or future water-related industrial and port areas should be located sufficiently far away from the waterfront so as not to interfere with industrial use of the waterfront. New access roads to waterfront industrial and port areas should be approximately at right angles to the shoreline, topography permitting.

5. Water-related industry and port uses should be planned so as to make the sites attractive (as well as economically important) uses of the shoreline. The following criteria should be employed to the maximum extent possible:

   a. Air and water pollution should be minimized through strict compliance with all relevant laws, policies and standards. Mitigation, consistent with the Commission's policy concerning mitigation, should be provided for all unavoidable adverse environmental impacts.

   b. When bayfront hills are used for water-related industries, terracing should generally be required and leveling of the hills should not be permitted.

   c. Important Bay overlook points, and historic areas and structures that may be located in water-related industrial and port areas, should be preserved and incorporated into the site design, if at all feasible. In addition, shoreline not actually used for shipping facilities should be used for some type of public access or recreation, to the maximum extent feasible. Public areas need not be directly accessible by private automobiles with attendant parking lots and driveways; access may be provided by hiking paths or by forms of public transit such as elephant trains or aerial tramways.

   d. Regulations, tax arrangements, or other devices should be drawn in a manner that encourages industries and port uses to meet the foregoing objectives.

6. The Commission, together with the relevant local governments, should cooperatively plan for use of vacant and underutilized water-related industrial priority use areas. Such planning should include regional, state and federal interests where appropriate, as well as public and special interest groups. Resulting plans should include: (a) a program for joint use of waterfront facilities where this is beneficial and feasible; (b)-a regulatory or management program for reserving the entire waterfront site or parcel for water-related industrial and port use; and (c) a program for minimizing the environmental impacts of future industrial and port development. Such plans, if approved by the relevant local governments and by the Commission, could be amended into the Bay Plan as special area plans.
7. The Bay Plan water-related industrial findings, policies, and priority use areas, together with any detailed plans as described above in 6., should be included as the waterfront element of any Bay regional industrial siting plan or implementation program.

Port policies indentified in the Bay Plan include the following:

1. Port planning and development should be governed by the policies of the Seaport Plan and other applicable policies of the Bay Plan. The Seaport Plan provides for:
   a. Expansion and/or redevelopment of port facilities at Benicia, Oakland, Redwood City, Richmond, and San Francisco, and development of new port facilities at Selby;
   b. Further deepening of ship channels needed to accommodate expected growth in ship size and improved terminal productivity;
   c. The maintenance of up-to-date cargo forecasts and existing cargo handling capability estimates to guide the permitting of port terminals; and
   d. Development of port facilities with the least potential adverse environmental impacts while still providing for reasonable terminal development.
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.

3.10.3.1.2 San Francisco Bay Area Seaport Plan

The San Francisco Bay Area Seaport Plan[113] (Seaport Plan) is a cooperative planning effort between BCDC and the Metropolitan Transportation Commission (MTC), and constitutes the maritime element of MTC's Regional Transportation Plan and is incorporated into BCDC's Bay Plan where it is the basis of the Bay Plan port policies. The Seaport Plan promotes the following goals:

[113] San Francisco Bay Conservation and Development Commission and Metropolitan Transportation Commission, 1996. *San Francisco Bay Area Seaport Plan,* April 18, 1996. Amended through June 2007.

1. Ensure the continuation of the San Francisco Bay port system as a major world port and contributor to the economic vitality of the San Francisco Bay region;
2. Maintain or improve the environmental quality of San Francisco Bay and its environs;
3. Provide for the efficient use of finite physical and fiscal resources consumed in developing and operating marine terminal through the year 2020;
4. Provide for integrated and improved surface transportation facilities between San Francisco Bay ports and terminals and other regional transportation systems; and
5. Reserve sufficient shoreline areas to accommodate future growth in maritime cargo, thereby minimizing the need for new Bay fill for port development.

To achieve these goals, the Seaport Plan employs land use designations and enforceable policies that MTC and BCDC use in their funding and regulatory decisions, and that local governments use in their land use and regulatory decisions. Areas determined to be necessary for future port development are designated as *port priority use areas* and are reserved for port-related and other uses that will not impede development of the site for port purposes. Within port priority use areas, *marine terminals* are identified and are reserved specifically for cargo handling operations.

The Seaport Plan includes a site-specific port priority use area discussion for the Port of Oakland. The Seaport Plan includes the following policies for the Port of Oakland:

1. By the year 2020, the Port of Oakland should have the annual cargo throughput capabilities shown in Table 11 (of the Seaport Plan).
2. Development of the Joint Intermodal Terminal and Vision 2000 berths at the form Fleet and Industrial Supply Center Oakland (FISCO), along with the planned relocation of the Joint Intermodal Terminal and subsequent expansion of the Port's container terminal areas, will accommodate the Port's projected growth in container cargo shipping through the year 2020 without significant Bay fill.
3. Schnitzer Steel is and should remain designated as an active dry bulk terminal as long as the facility is used for this purpose. At such times as the site is no longer needed for recycling scrap steel or other bulk shipping operations, it should first be considered for conversion to a container terminal. If Schnitzer Steel is converted to a container terminal, it should have an expected annual throughput capability of 1,520,000 metric tons.
4. Approximately 29 acres of Bay fill will be needed at Berths 20-21 to create a longer linear wharf and backland for efficient terminal operations at the Outer Harbor. This project will be implemented as part of the Port's phased program of relocating the JIT and expanding its container terminal areas.
5. Figure 4 (of the Seaport Plan) depicts the port priority use area at the Port of Oakland.

3.10.3.1.3 Long Term Management Strategy

The Long Term Management Strategy (LTMS) program was developed in 1990. The LTMS is a multi-agency (U.S. Army Corps of Engineers [Corps], EPA Region IX, Regional Water Quality Control Board [RWQCB], State Water Resources Control Board [SWRCB], and BCDC) regional organization with an objective to develop coordinated approaches to dredging programs, sediment

studies, and cost sharing. The LTMS program outlines a program for the disposal of dredged material from San Francisco Bay over 50 years. Dredging and disposal of Bay sediments, including those generated by the construction and maintenance of maritime facilities are reviewed for consistency with the LTMS program.

The LTMS program arose out of the San Francisco Estuary Project (SFEP), which was established through the 1987 amendments to the Clean Water Act of 1987. The SFEP was developed as a five-year cooperative effort between the EPA and State of California to promote more effective management of the San Francisco-Delta Estuary and to restore and maintain the Estuary's water quality and natural resources. The result of the effort was a Comprehensive Conservation and Management Plan (CCMP) for the San Francisco Estuary (SFEP 1993). The CCMP addresses aquatic resources, wildlife, wetland management, water use, pollution prevention and reduction, dredging and waterway modification, land use, public involvement and education, and research and monitoring program areas. For each program area, goals, recommended approaches, objectives, and actions are provided. A preliminary implementation strategy is included that suggests ways in which state and federal agencies can contribute to financing CCMP actions.

3.10.3.1.4 The San Francisco Bay Trail Plan

The San Francisco Bay Trail Plan (Bay Trail Plan),[114] prepared by the Association of Bay Area Governments (ABAG), proposes development of a regional hiking and bicycling trail around the perimeter of San Francisco and San Pablo bays. The Plan was prepared by ABAG pursuant to Senate Bill 100 (1987), which mandates the Bay Trail to:

- provide connections to existing park and recreation facilities;
- create links to existing and proposed transportation facilities; and
- be planned in such a way as to avoid adverse effects on environmentally sensitive areas.

The plan proposes an alignment for a 400-mile recreational “ring around the Bay.” Approximately one-third of the trail currently exists as either hiking-only paths, hiking and bicycling paths, or as on-street bicycle lanes. When complete, the Bay Trail will create connections between more than 90 parks and publicly accessible open-space areas around San Francisco and San Pablo bays. By providing access to a wide array of commercial ferries and public boat launches, the trail will establish connections to “water trails” that will enable outdoor enthusiasts to appreciate the Bay not only from the shoreline, but from the water as well. The Bay Trail maps identify a planned Bay Trail segment along Maritime Street.

3.10.3.1.5 Tidelands Trust Exchange Agreement

As part of implementation of the OARB Reuse and Redevelopment Plans, the City of Oakland and the California State Lands Commission (SLC) negotiated and settled issues related to the designation of lands subject to Tidelands Trust in the OARB through the recordation of the Oakland Army Base Title Settlement and Exchange Agreement (“Exchange Agreement”) dated August 7, 2006. The SLC has jurisdiction over “tidelands trust” lands, which are certain tidal and submerged lands granted by

[114] Association of Bay Area Governments, 1989. *The San Francisco Bay Trail Plan.* July.

the state in trust to cities and counties to develop harbors in furtherance of state and national commerce. These grants require that granted lands be used consistent with the public trust and terms of the grant and require the grantee to use the revenues produced from these lands for trust purposes consistent with the grants. Section 6 of the Exchange Agreement requires that there be public access in the form of "permanent vehicular, bicycle and pedestrian access to the Public Trust lands" within the OARB Sub-district Gateway Development Area and to the adjoining proposed Gateway Park; prior to any approval of any proposed circulation plan in the area, a written determination from the Executive Officer of the Commission must be obtained that the plan meets the requirements of the Exchange Agreement. The City is coordinating with the SLC to review the proposed public access plan and obtain the required written determination, which the City believes satisfies the requirement stipulated by the Exchange Agreement.

3.10.3.2 Local

3.10.3.2.1 City of Oakland General Plan

The City of Oakland General Plan (General Plan) is a comprehensive plan for the growth and development of the City. The General Plan includes policies related to: land use and circulation; housing; recreation; conservation and open space; noise; environmental hazards; and historic resources. These topics are addressed within individual elements of the General Plan: Land Use and Transportation; Bicycle Master Plan; Open Space, Conservation and Recreation; Noise; Safety; Housing; Historic Preservation and Scenic Highway Element. Each are discussed separately below.

Regarding a project's consistency with the General Plan in the context of CEQA, the Oakland General Plan states the following:

> The General Plan contains many policies which may in some cases address different goals, policies and objectives and thus some policies may compete with each other. The Planning Commission and City Council, in deciding whether to approve a 2012 Project, must decide whether, on balance, the project is consistent (i.e., in general harmony) with the General Plan. The fact that a specific project does not meet all General Plan goals, policies and objectives does not inherently result in a significant effect on the environment within the context of the California Environmental Quality Act (CEQA). (City Council Resolution No. 79312 C.M.S.; adopted June 2005)

The General Plan is comprised of several elements or chapters; these elements are described below.

(1) Land Use and Transportation Element. The Land Use and Transportation Element[115] (LUTE), adopted in March 1998, addresses land use and transportation issues in a single document. In order to accomplish a more holistic planning process that incorporates City-wide infrastructural needs with a desire for neighborhood decision-making, the LUTE includes general development policies for the City, in addition to district-specific policies. The LUTE is bound by a vision for the City that includes creating: "clean and attractive neighborhoods rich in character and diversity, each with its own distinctive identity, yet well-integrated into a cohesive urban fabric" in addition to "a diverse and vibrant downtown with around-the-clock activity."

[115] Oakland, City of, 1998. Community and Economic Development Agency, *Envision Oakland, City of Oakland General Plan, Land Use and Transportation Element, Volume 1.* March, as updated through 2007.

The LUTE includes land use designations for all land within the City's boundaries. Land use designations within the project site include General Industrial/Transportation and Business Mix. These General Plan land use designations are shown in Figure 3.10-1. These designations are further described below.

General Industrial/Transportation. The intent of this classification is to recognize, preserve and enhance areas of the City for a wide variety of businesses and related establishments that may have the potential to create off-site impacts such as noise, light/glare, truck traffic, and odor. These areas are characterized by sites with good freeway, rail, seaport and/or airport access. The maximum overall Floor Area Ratio (FAR) for this classification is 2.0.

Business Mix. The intent of this designation is to create, preserve and enhance areas of City that are appropriate for a wide variety of business and related commercial and industrial establishments. High impact industrial uses including those that have hazardous materials on-site may be allowed provided they are adequately buffered from residential area. These areas may accommodate a mix of businesses such as light industrial, manufacturing, food processing, commercial, bioscience and biotechnology, research and development, environmental technology, business and health services, air, truck and rail-related transportation services, warehouse and distribution facilities, office, and other uses of similar business character. The maximum FAR for this classification is 4.0.

In order to accomplish a more holistic planning process that incorporates City-wide infrastructural needs with a desire for neighborhood decision-making, the LUTE includes general development policies for the City, in addition to district-specific policies. Policies related to the 2012 Project are listed below:

- Policy I/C1.5, Using City-Owned Property to Stimulate Economic Development: City-owned properties should, where feasible, be utilized to stimulate economic development activities or serve as catalysts to such efforts.
- Policy I/C1.9, Locating Industrial and Commercial Area Infrastructure: Adequate public infrastructure should be ensured within existing and proposed industrial and commercial areas to retain viable existing uses, improve the marketability of existing vacant or underutilized sites, and encourage future use and development of these areas with activities consistent with the goals of this Plan.
- Policy I/C1.10, Coordinating City and Port Economic Development Plans: The City and Port should mutually develop and implement a coordinated plan-of-action to support all airport and port related activities which expand the local or regional employment or revenue base.
- Policy I/C2.1, Pursuing Environmental Clean-Up: The environmental cleanup of contaminated industrial properties should be actively pursued to attract new users in targeted industrial and commercial areas.
- Policy I/C4.1, Protecting Existing Activities: Existing industrial, residential, and commercial activities and areas which are consistent with long term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.
- Policy I/C4.2, Minimizing Nuisances: The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls.

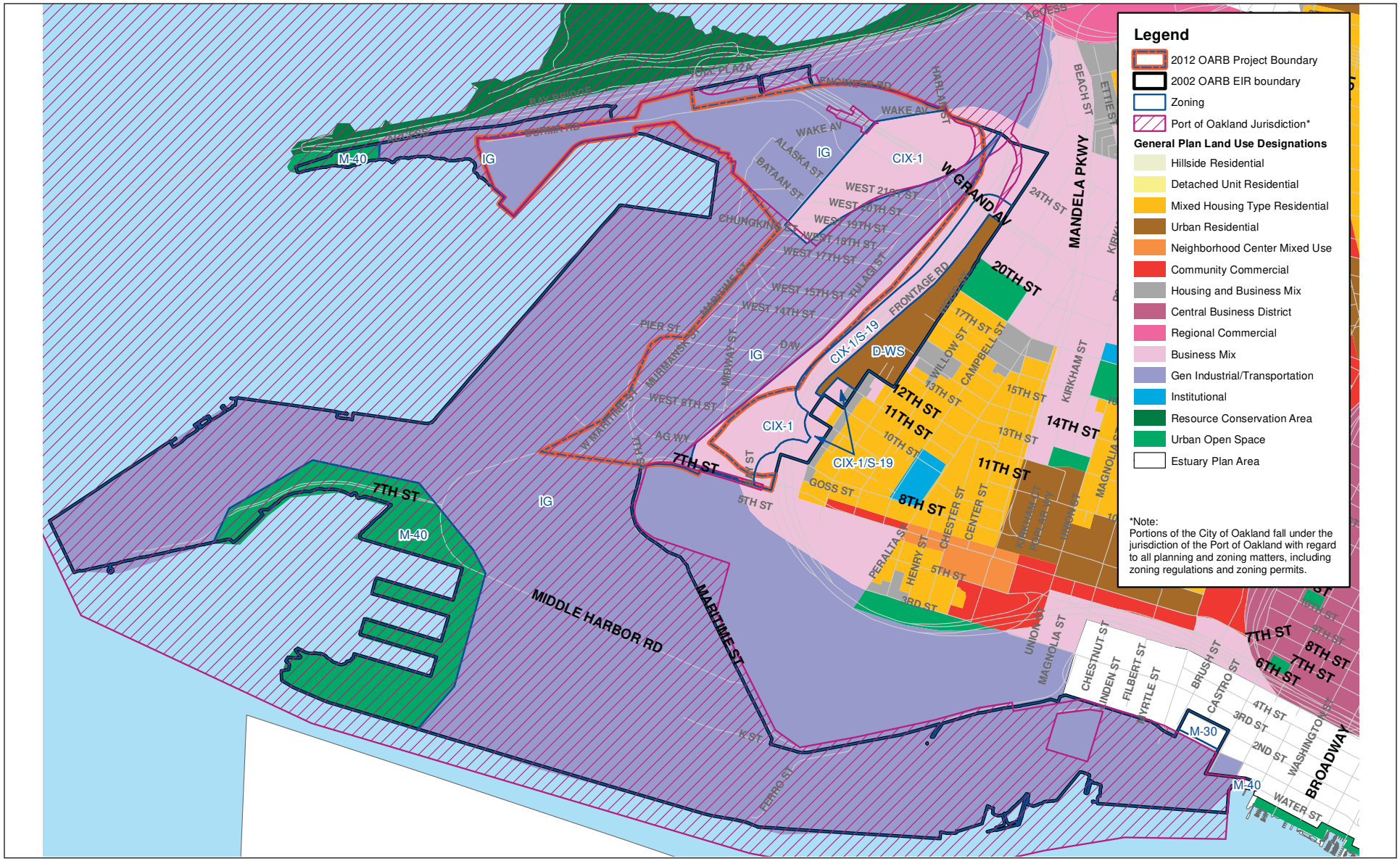

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FIGURE 3.10-1

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2012 Oakland Army Base Project

General Plan and Zoning Designations

SOURCE: CITY OF OAKLAND, APRIL 2012.

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- Policy I/C4.3, Reducing Billboards: Billboards should be reduced or eliminated in commercial and residential areas in Oakland neighborhoods through mechanisms that minimize or do not require the expenditure of city funds.
- Policy I/C5.1, Planning for Military Base Reuse: Plans for the reuse of military bases should encourage activities which provide economic development expansion opportunities for the City.
- Policy I/C5.3, Planning for the Army Base: Land reuse plans for the Oakland Army Base site shall encourage activities that will result in expanded employment opportunities and revenues for the city and West Oakland community.
- Policy T1.1, Supporting the Port: Support the Port of Oakland's effort to compete as a primary Port of Call for the West Coast shipping industry.
- Policy T1.5, Locating Truck Services: Truck services should be concentrated in areas adjacent to freeways and near the seaport and airport, which ensuring the attractiveness of the environment for visitors, local business, and nearby neighborhoods.
- Policy T1.6, Designating Truck Routes: An adequate system of roads connecting port terminals, warehouses, freeways and regional arterials, and other important truck destination should be designed. This system should rely upon arterial streets away from residential neighborhoods. (See the Truck Route Diagram in Volume II of the Land Use and Transportation Element).
- Policy T1.8, Re-routing and Enforcing Truck Routes: The City should make efforts to re-route truck traffic away from neighborhoods, wherever possible, and enforce truck route controls.
- Policy T3.5, Including Bikeways and Pedestrian Walks: The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
- Policy T6.3, Making the Waterfront Accessible: The waterfront should be made accessible to pedestrians and bicyclists throughout Oakland.
- Policy W1.1, General Plan Conformance of Projects in the Seaport and Airport Areas: The Port shall make a written determination on General Plan conformity for each project, plan, and/or land use guideline it approves in the Port area. Prior to making such determination the Port will forward its proposed determination to the Director of City Planning, who may provide the Port with written comments within a specified time period. Any comments so provided shall be considered and responded to in writing by the Port in its conformity determination.

  For projects in the Port Area outside the seaport and airport areas, the Port's determination of General Plan conformity may be appealed to the City Council within 10 days. If not appealed within 10 days, the Port's determination shall be deemed final. If appealed, the City Council, by a vote of at least 6 members, shall make a final determination on the appeal within 30 days. The City Planning Commission shall provide recommendation to the City Council for consideration in hearing on appeal of the Port's conformity determination.

  For purposes of this policy, the Airport area shall be considered that portion of the Port area west of Doolittle Drive, and the Seaport area shall be considered the portion of the Port Area generally lying west of Maritime Street and northwest of the Estuary Plan area.

  Projects appealable to the City Council under policy are those for which an Environmental Impact Report or Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act; new construction, additions, changes in use, or, expansion of use involving 20,000 square feet or more in floor area; and public improvements in transportation or public access valued at $250,000 or more.

- Policy W1.2, Planning with the Port of Oakland: Plans for maritime and aviation operations as well as activities on all lands in Port jurisdiction should be coordinated with, and generally consistent with the Oakland General Plan.
- Policy W1.3, Reducing Land Use Conflicts: Land uses and impacts generated from Port or neighborhood activities should be buffered, protecting adjacent residential areas from the impacts of seaport, airport, or other industrial uses. Appropriate siting of industrial activities, buffering (e.g., landscaping, fencing, transitional uses, etc.), truck traffic management efforts, and other mitigation's should be used to minimize the impact of incompatible uses.
- Policy W2.2, Buffering of Heavy Industrial Uses: Appropriate buffering measures for heavy industrial uses and transportation uses on adjacent residential neighborhoods should be developed and implemented.
- Policy W2.3, Providing Public Access Improvements: Public access improvements to the waterfront and along the water's edge should be implemented as projects are developed. The access improvements should conform to the requirements of the Bay Conservation and Development Commission (BCDC).
- Policy W2.5, Improved Railroad Crossings: To create safe access to the water pedestrian, bicycle, and automobile railroad crossing should be provided where feasible. Crossings could include grade separations, at-grade crossings, skyway bridges, or connections between buildings.
- Policy W2.6, Providing Maritime and Aviation Viewing Access: Safe access to areas for viewing maritime and aviation activities without interfering with seaport and airport activities should be encouraged.
- Policy W2.9, Parking at Key Points: Parking should be developed at key points generally set back from the waterfront to minimize the impact of private automobile use in high-activity areas. Parking structures that incorporate ground floor uses, are available for day and night activities, and allow for shared use, are preferred.
- Policy W3.1, Requiring Consistency with Conservation Objectives and Policies: Waterfront objectives, policies, and actions regarding geology, land stability, erosion, soils, water quality, flood hazards, wetland plant and animal habitats, and air quality and pollutants, shall be consistent and in compliance with the 1996 Open Space, Conservation, and Recreation Element of the City's General Plan.
- Policy W3.2, Enhancing the Quality of the Natural and Built Environment: The function, design and appearance, and supplementary characteristics of all uses, activities, and facilities should enhance, and should not detract from or damage the quality of, the overall natural and built environment along the waterfront.
- Policy W3.4, Preserving Views and Vistas: Buildings and facilities should respect scenic viewsheds and enhance opportunities for visual access of the waterfront and its activities.
- Policy W4.1, Creating Coordinated and Comprehensive Approaches: Public agencies and jurisdictions involved in waterfront matters should work together in a cooperative and coordinated way and strive for consistency among general planning, strategic planning, and specific planning practices and programs.
- Policy W4.2, Considerations for the OBRA Process: The Oakland Base Reuse Authority (OBRA) process should consider issues affecting West Oakland including: public access and public safety to the waterfront, open space, and amenities; buffering of heavy industrial and transportation uses on residential neighborhoods; and potential job creation and other economic benefits generated as a result of the Army Base re-use (See also the Industry and Commerce Policy Framework section).
- Policy W4.3, Coordinating Permit Process Procedures: The City and Port should ensure that the permit process procedures for waterfront development are coordinated and efficient while providing the public notification and input.

- Policy W4.4, Public Access Plan: The City, Port, and Bay Conservation and Development Commission (BCDC) will complete a public access plan for the entire waterfront which will then be adopted by the City, Port and BCDC, as appropriate.
- Policy W5.1, Conserving Land for Airport and Seaport Use: Lands needed for maritime and aviation operations are of local, regional, national, and international importance and should be recognized as a valuable economic resource. The development of these lands to enhance maritime and aviation functions should be encouraged, and uses that would impair functional operation of the airport and seaport should not be permitted.
- Policy W5.2, Defining Seaport and Airport Uses: Pursuant to the Port of Oakland's mission and the 'Trust Provisions' established by the State of California, Port controlled property within the Seaport and Airport areas should be used primarily for purposes that are unique to a modern seaport or airport, require water frontage or access to regional airspace, relate to port operations and expansion, or are dependent on proximity to maritime and/or aviation facilities. Examples of such activities include:
    - Cargo handling; ship and airplane handling/building/repair; commercial fishing, etc.
    - Cargo industry services (e.g., warehousing, distribution, freight forwarding, container storage and repair, etc.)
    - Passenger services (e.g., ferry facilities, shuttle and car rental facilities, reservations and ticketing, flight catering, baggage handling, parking, hotels, etc.)
    - Ancillary and support services (e.g., truck and rail operations and associated services, administration, customs, education/training facilities, etc.)
- Policy W6.1, Maintaining a Competitive Edge: In order to maintain international stature and competitiveness, the Port should continue to develop, expand, or otherwise modernize facilities and/or support infrastructure to enhance its overall efficiency and capabilities to handle increasing amounts of cargo and passengers. Examples include:
    - Outer harbor terminals expansion and modernization
    - Channel deepening as necessary
    - Consolidation of rail services and facilities
    - Air passenger terminals expansion and modernization
    - Expansion of air cargo services and facilities
    - Improvement of BART/Airport access and other public transportation access
    - Continued development of ferry services
    - Expansion of telecommunications and utility networks
- Policy W7.1, Developing Lands In the Vicinity of the Seaport/Airport: Outside the seaport and airport, land should be developed with a variety of uses that benefit from the close proximity to the seaport and airport and that enhance the unique characteristics of the seaport and airport. These lands should be developed with uses which can buffer adjacent neighborhoods from impacts related to such activities.
- Policy W7.2, Encouraging Commercial and Industrial Uses: Other commercial and industrial uses should be encouraged at appropriate locations (Port-owned or not) where they can provide economic opportunity to the community at large.

(2) Bicycle Master Plan. The Bicycle Master Plan[116] (BMP) is the official policy document addressing the development of facilities and programs to enhance the role of bicycling as a viable transportation choice in Oakland. The BMP is part of the LUTE Element of the General Plan. The BMP defines City policies and recommends actions that would encourage and support bicycle travel improvements.

To develop Oakland as a bicycle-friendly community, the BMP identifies the following goals:

- **Infrastructure**: Develop the physical accommodations, including a network of bikeways and support facilities, to provide for safe and convenient access by bicycle.
- **Education**: Improve the safety of bicyclists and promote bicycling skills through education, encouragement, and community outreach.
- **Coordination**: Provide a policy framework and implementation plan for the routine.
- **Accommodation**: Accommodation of bicyclists in Oakland's projects and programs.

The Bike Master Plan identifies a proposed Bike Path (Class 1) on Maritime Street within the project site. Bicycle Paths (Class 1) provide for bicycle travel on a paved right-of-way that is completely separated from the street. Bicycle paths are often located along waterfronts, creeks, railroad rights-of-way (active or abandoned), or freeways where there are a limited number of cross streets and drive-ways that create conflict points. They are typically shared with pedestrians and often called mixed-use paths. Bicycle-related issues are addressed in Section 3.16, Transportation/Traffic.

(3) Open Space, Conservation and Recreation Element. In the Open Space, Conservation and Recreation (OSCAR) Element,[117] policies address the management of open land, natural resources, and parks in Oakland. The OSCAR Element defines 12 distinct planning areas, and sets forth a strategy for each that recommends specific priorities to be considered during decision making. The strategies are not binding, and they are flexible and fluid in nature, intended to change in response as future opportunities or constraints present themselves. The study area is located within two OSCAR planning areas: West Oakland and the Harbor. Relevant or potentially relevant recommended strategies include the following:

- Improve access to the shoreline, including construction of the Bay Trail, with spurs along Maritime Street and 7th Street/Middle Harbor Road.
- Continue street planting efforts and other programs to "green" West Oakland.
- Improve the eastbound Bay Bridge "gateway" to Oakland (that land within the OARB sub-district immediately south of the Bay Bridge touchdown).
- Establish visitor observation areas and promote public awareness of the economic importance of the Oakland shoreline.

(4) Noise Element. Adopted in 2005, the City's General Plan Noise Element is required to "analyze and quantify, to the extent practical, current and projected noise levels from the following noise sources: major traffic thoroughfares, passenger and freight railroad operations, commercial and

[116] Oakland, City of, 2007. *Bicycle Master Plan*. December.

[117] Oakland, City of, 1996. *Open Space, Conservation, and Recreation (OSCAR) Element*.

general aviation operations, industrial plants, and other ground stationary noise sources contributing to the community noise environment."[118] Noise from these sources is depicted on noise contour maps that are used to guide land use decisions to reduce noise impacts, especially on sensitive receptors. According to the Noise Element, sensitive receptors include "residences, schools, churches, hospitals, elderly-care facilities, hotels and libraries, and certain types of passive recreational open space." The Noise Element also includes a land use-noise compatibility matrix that illustrates the degree of acceptability of exposing various sensitive land uses to noise. Noise is addressed in Section 3.12, Noise, of this Initial Study/Addendum document.

(5) Safety Element. Adopted in November, 2004, the City of Oakland's Safety Element, Protect Oakland, is intended to "reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from large-scale hazards."[119] This Element addresses public safety, geologic hazards, fire hazards, hazardous materials, and flooding hazards. Given the topics that are addressed in the Safety Element, most of its policies generally apply citywide.

The Safety Element includes maps identifying hazards within the City of Oakland. These maps identify some hazards within the project site, including a potential liquefaction area, within a Tsunami run-up zone, and the existence of hazardous materials. Hazards and hazardous materials are address in Section 3.8 of this Initial Study/Addendum document.

(6) The Housing Element. The Housing Element[120] of the General Plan was adopted by the City Council on December 21, 2010. California law requires that each city and county adopt a housing element that includes: an assessment of housing needs; a statement of the community's goals, objectives and polices related to housing; and a five-year schedule of actions to implements the goals and objectives of the housing element.

The following goals are identified in the Housing Element:

- *Goal 1:* Provide adequate sites suitable for housing for all income groups.
- *Goal 2:* Promote the development of adequate housing for low- and moderate-income households.
- *Goal 3:* Remove constraints to the availability and affordability of housing for all income groups.
- *Goal 4:* Conserve and improve older housing and neighborhoods.
- *Goal 5:* Preserve affordable rental housing.
- *Goal 6:* Promote equal housing opportunity.
- *Goal 7:* Promote sustainable development and smart growth.
- *Goal 8:* Increase public access to information through technology.

Housing is not proposed as part of the 2012 Project.

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[118] Oakland, City of, 2005. *General Plan, Noise Element*. June.

[119] Oakland, City of, 2004. *General Plan, Safety Element*. November.

[120] Oakland, City of, 2010. *Housing Element, 2007-2014*. November 17.

(7) Historic Preservation Element. The Historic Preservation Element of the General Plan was adopted in 1994 and amended in 1998. The element sets forth a historic preservation strategy that seeks to promote preservation of a wide range of properties and districts in a manner reasonably balanced with other concerns and consistent with other City goals and objectives. The Historic Preservation Element recognizes that Oakland is home to a rich array of significant older properties that set it apart from other California cities, and that preservation and enhancement of these properties could contribute positively to Oakland's economy affordable housing stock, image, and quality of life.

The Historic Element identifies two local landmarks within the 16th/Wood and Maritime sub districts: the Southern Pacific Railroad (SPRR) Station at 16th and Wood streets (also known as the Amtrak Station), and the Southern Pacific mole westerly terminus at the end of 7th Street. Development affecting either of these resources would be subject to policies of the Historic Element. It also identifies the OARB Historic District and former Fleet and Industrial Supply, Oakland (FISCO) site (no longer extant) as Areas of Primary Importance. Historic preservation is evaluated in Section 3.5, Cultural Resources.

(8) Scenic Highways Element. The Scenic Highways Element[121] was adopted in 1974. The Scenic Highways Element includes: the identification of significant visual corridors; a discussion of the existing measures that protect the corridors; a survey of the problems which exist as a result of the shortcomings of past planning efforts, inadequate legislation or enforcement; policy statements to corroborate the City's commitment; and an action program to implement proposed improvements. Please see Section 3.1, Aesthetics, for a discussion of scenic highways.

3.10.3.2.2 City of Oakland OARB Redevelopment Area Plan

As discussed in Sections 1.2.2a and Section 2.1 of the Introduction and Project Description, respectively, in 2000 the City adopted and approved the *Oakland Army Base Redevelopment Area Plan*, establishing a 1800-acre redevelopment project area that included the former Oakland Army Base (OARB). The *OARB Redevelopment Area Plan* incorporated the program for the former OARB that was set forth in the *Final Reuse Plan for the OARB*, which comprises the bulk of the area of the 2012 Project.

3.10.3.2.3 City of Oakland Final Reuse Plan for the Oakland Army Base

Prior to the official closure of the OARB in September 1999, the Oakland Army Base Reuse Authority (OBRA) lead a community planning process to guide the future reuse of the OARB that resulted in a *Draft Final Reuse Plan for the Oakland Army Base* (OBRA 1998, amended in 2001 and 2002). The Reuse Plan put forth a "Conceptual Reuse Strategy" that identified a menu of intended land uses for future reuse of the former OARB or "Gateway Development Area" under the concept of what was called the "Flexible Alternative." The preferred menu of land uses focused on light industrial, research and development and flex office. The Conceptual Reuse Strategy and Flexible Alternative were predicated on the notion that actual development with the Gateway Development Area could change over time to reflect the prevalent market conditions and demands, in order to achieve the broader goals and objectives of the *Reuse Plan* and *Redevelopment Plan.*

[121] Oakland, City of, 1974. *Scenic Highways, An Element of the Oakland General Plan.* September.

3.10.3.2.4 City of Oakland Planning Code

The City of Oakland Planning Code (Planning Code) implements the policies of the General Plan and other City plans, policies, and ordinances. The Planning Code divides the City into districts, each of which is assigned different regulations. These regulations direct the construction, nature, and extent of building use at the time of project application completeness. The project site is designated as Industrial General (IG) and Commercial Industrial Mix 1 (CIX-1). Figure 3.10-1 shows the zoning designations for the 2012 Project site. These designations are future described below.

- **IG Zone**. The IG zone is intended to create, preserve and enhance areas of the City that are appropriate for a wide variety of businesses and related commercial and industrial establishments that may have the potential to generate off-site impacts such as noise, light/glare, odor, and traffic. This zone allows heavy industrial and manufacturing uses, transportation facilities, warehousing and distribution, and similar and related supporting uses. This district is applied to areas with good freeway, rail, seaport, and/or airport access
- **CIX-1 Zone**. The CIX-1 zone is intended to create, preserve, and enhance the industrial areas of West Oakland that are appropriate for a wide variety of businesses and related commercial and industrial establishments. This zone is intended to accommodate existing older industries and provide flexibility in order to anticipate new technologies. Large-scale commercial and retail uses will be limited to sites with direct access to the regional transportation system.

3.10.3.2.5 Draft City of Oakland Energy and Climate Action Plan

The purpose of the Oakland Energy and Climate Action Plan[122] (ECAP) of 2011 is to identify and prioritize actions the City of Oakland can take to reduce energy consumption and greenhouse gas (GHG) emissions associated with activities that occur in Oakland. The ECAP recommends GHG reduction actions and establishes a framework for coordinating implementation, as well as monitoring and reporting on progress.

The primary sources of Oakland's GHG emissions are transportation and land use, building energy use, and material consumption and waste. In July 2009, the Oakland City Council approved a preliminary GHG reduction target for the year 2020 of 36 percent below 2005 levels. The ECAP recommends over 150 actions to be implemented over a ten-year period that would enable the City of Oakland to achieve a 36 percent reduction in GHG. Implementation of renewable energy and energy efficiency measures include measures to reduce vehicle miles traveled annually by 20 percent, electricity consumption by 32 percent and natural gas consumption by 14 percent. These measures include the adoption of a green building ordinance for private development (which was completed in October 2010), the use of property-based financing for alternative energy systems, and advancing the use of transit.

A Draft ECAP was adopted in 2011 for the purposes of performing CEQA review, which is currently underway.

[122] Oakland, City of, 2011. *Draft Energy and Climate Action Plan.* March 1.

3.10.3.2.6 Port of Oakland

A Port Building or Development Permit is issued for alteration of property within the Port Area. In accordance with the City of Oakland Charter, Article VII, the Port of Oakland has land use jurisdiction within the Port Area, which encompasses both Port-owned and privately-owned land and water areas in the seaport, airport, and Oakland Airport Business Park. The Port Building Permit is issued in lieu of the City Planning and Zoning Permit for properties within the Port Area. Development permits approved by the Port must comply with the City of Oakland General Plan. Any development or construction in the Port Area must be approved by the Port prior to start of work, and prior to submittal for a City of Oakland building permit.

3.10.4 EXISTING CONDITIONS

The approximately 360.5-acre project site is dominated by industrial and transportation uses. The project site contains truck parking, cargo container storage, maintenance facilities, rail yards, large warehouses, and vacant land. Table 2-2 in Chapter 2, Project Description, lists the existing tenants and uses on the project site. Figure 2-4 (included in the Project Description) provides an aerial of the project site and generally notes existing land uses.

3.10.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Physically divide an established community;

b) Result in a fundamental conflict between adjacent or nearby land uses;

c) Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment; or

d) Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan.

These criteria are discussed below.

a) Would the project physically divide an established community?

The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. For instance, the construction of an interstate highway through an existing community may constrain travel from one side of the community to another; similarly, such construction may also impair travel to areas outside of the community.

The location of the 2012 Project is within an existing industrial area, and includes several existing attributes which limit movement across the site, including active rail lines along the eastern border of the site.

The additional rail lines associated with the project would not physically divide a community; internal rail lines currently exist on site, and installation of the proposed lines would not significantly hinder movement within the site. The installation of the rail lines on the eastern border of the property would also not result in a significant impact as the West Grand Avenue overpass and 7th Street underpass currently allow access across the railroad tracks; the increase in the number of rail lines at these locations would not impede vehicle or pedestrian access to the site.

The 2012 Project would also result in the removal of some existing roadways within the project site (e.g., Tulagi Street, Warehouse Road, etc). However, these existing streets are internal roadways that facilitate movement within the project site, not roadways which facilitate movement from outside the site or across the site. As such, removal of these minor internal roadways would be considered a less-than-significant impact.

Furthermore, as part of the project, bike lanes and sidewalks would be provided along many of the major roadways within the project site (Maritime Street and West Burma Road). These improvements would result in improved circulation within and through the project site. For all of these reasons, the 2012 Project would result in a less-than-significant land use impact with regard to physical division of an established community. Proposed bike and pedestrian improvements are shown in Figure 2-5b.

2002 Impact: No Impact

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

b) Would the project result in a fundamental conflict between adjacent or nearby land uses?

As noted in the 2002 EIR, the project site is separated from residential land uses located to the south-east by the elevated I-880 freeway; the closest residential land uses are approximately 750 feet from the project site. Due to its industrial nature and potential for odors, the EBMUD Main Wastewater Treatment Plant (MWWTP), located north of the project site, represents a potential incompatibility with land uses that attract a significant amount of people.

For the 2012 Project, the portion of the project site that would include the greatest people-attracting uses (Research and Development (R&D)) is located on the western portion of the project site and is separated from the MWWTP by the elevated West Grand Avenue as well as intervening development. The portion of the 2012 Project site above Grand Avenue, nearest the EBMUD MWWTP, would include recycling facilities, which would not be anticipated to attract a large number of employees or people visiting the site. In addition, due to their industrial nature, the sensitivity of these uses to potential occasional odor events is low. While odor incidents may occasionally occur, such incidents are not expected to occur with such frequency that odors would result in a fundamental land use incompatibility, and the impact is considered less than significant.

As noted in the 2002 EIR, the project would include the expansion of the rail yard on the site. The new rail yard would be larger and more active than the former Knight rail yard. This new rail yard, an

industrial use, would be separated from incompatible residential uses located in West Oakland to the east and southeast by the elevated I-880 freeway and existing rail uses. The increased expansion of the rail yard associated with the 2012 Project is not expected to result in a fundamental land use incompatibility, and the impact would still be considered less than significant.

The 2002 EIR evaluated a site plan that included significantly more office and R&D development at the project site. These types of the uses are considered "people-attracting" uses, with employees and visitors coming to these locations. In comparison, industrial and warehouse uses are not considered a "people-attracting" use – the number of employees generated by these types of uses would be fewer than an office or R&D use.

The 2012 Project would result in significantly less office development and more warehouse development than evaluated in the 2002 EIR. Because of this change in the mix of land uses proposed at the project site, the potential for land use conflicts (between office/R&D and industrial/warehouse) would be reduced. R&D would potentially be located within two buildings on the project site and would be over 2,500 feet from the closest industrial/warehouse structure. As such, Impact 4.2-1 (dissimilar land uses located near each other) identified in the 2002 EIR would be reduced to a less-than-significant level, and Mitigation Measures 4.2-1, 4.2-2, and 4.2-3 would no longer be applicable.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.2-1 through 4.2-3. *[Note: These mitigation measures are not applicable to the 2012 Project.]*

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

c) Would the 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.

Policy conflicts, in and of themselves and in the absence of adverse physical impacts, are not considered to have significant effects on the environment and are differentiated from impacts identified in the other topical sections of this chapter. Physical impacts associated with policy conflicts are addressed in the appropriate technical sections (e.g., noise, traffic). Other local, regional or State plans and policies, such as those relating to air quality or water quality, are discussed in those sections of this IS/Addendum.

The 2002 EIR identified the following policy inconsistencies:

> **Impact 4.1-1:** Fill to create fastland for New Berth 21 plus a nominal portion of the adjacent Gateway development area, and potential minor fill for Gateway Park shoreline stabilization may conflict with Bay Plan objectives and policies.

Impact 4.1-2: Proposed land uses in a portion of the 16th/Wood sub-district would be fundamentally inconsistent with Seaport and Bay plan Port Priority Use designations.

Impact 4.1-3: Loss of all structures contributing to a historic district, and loss of the district itself may conflict with Oakland General Plan Historic Preservation Element goals and policies.

Impact 4.1-1 would not be applicable as the 2012 Project does not include creating a fastland for Berth 21. Additionally, Impact 4.1-2 applies to the 16th/Wood sub-district, which is not included in the 2012 Project site.

Impact 4.1-3 would still apply to the project site. As noted in the 2002 EIR, the 2012 Project would result in a significant and unavoidable cultural resources impact related to the loss of all structures contributing to a historic district.

Consistency with the intent of key plans and policies is discussed below:

- **San Francisco Bay Plan:** Redevelopment of the Gateway and Port development areas of the OARB as proposed by the 2012 Project would be consistent with the intent of Bay Plan policies regarding water-related industry, ports, and public access.
- **San Francisco Bay Area Seaport Plan:** Redevelopment of the Port development area as proposed by the 2012 Project would be consistent with the intent of Seaport Plan policies regarding cargo forecasts, Port priority Use areas, and specific policies designated for the Port of Oakland.
- **San Francisco Bay Trail Plan:** Redevelopment of the project site as proposed by the 2012 Project would be consistent with the intent of Bay Trail Plan policies regarding trail alignment and transportation access.
- **State Lands Commission (SLC) Tidelands Trust Exchange Agreement:** As shown in Figure 2-5b, the project proposes permanent vehicular, bicycle and pedestrian access within OARB Sub-district Gateway Development Area and to the adjoining future Gateway Regional Park to the west of the project area. Per letter dated May 18, 2012, the SLC has approved that the 2012 Project satisfies the requirement stipulated by the Exchange Agreement (This letter is included in Appendix D.)
- **Long Term Management Strategy (LTMS) Program:** No dredging would be required for the continued operation of the wharf, beyond the occasional maintenance that already occurs. The 2012 Project would conform to the LTMS Program.
- **City of Oakland General Plan:**
    - Land Use and Transportation Element (LUTE). The 2012 Project would be consistent with the objectives and associated policies of the LUTE regarding the following: expansion and retention of the Oakland job base and economic strength; provision of adequate infrastructure; reduction of truck effects on local neighborhoods; encouragement of waterfront access; creation of a high-quality natural and built waterfront environment; promotion of the Port of Oakland; provision of commercial areas; and reduction or elimination of hazardous wastes. Although the proposed project is not expected to require new hazardous waste storage, treatment, or disposal facilities in the area, any such facilities shall comply with applicable requirements.

Nine billboards are proposed as part of the 2012 Project. LUTE Policy I/C4.3, which encourages but does not require billboard removal in commercial and residential zones, does not apply here because the project site is located in industrial zones. Moreover, the City has a billboard amortization program which has removed in excess of 148 billboards over the past 12 years. The amortization program is ongoing and is anticipated to remove more billboards in the future. In addition, about 70 billboards have been removed through billboard relocation agreements over the same time period.

- Bicycle and Pedestrian Master Plans. The 2012 Project would be consistent with the Bicycle and Pedestrian Master Plans, as it proposes to enhance bicyclist and pedestrian safety by providing designated bicycle facilities and sidewalks (where none currently exist) on Maritime Street and Burma Road, as discussed in detail in Section 3.16 Transportation/Traffic.
- Open Space, Conservation and Recreation Element (OSCAR). The 2012 Project would be consistent with objectives and associated policies of the OSCAR regarding the improving physical and visual access to the shoreline, including the Bay Trail and protecting and promoting the beneficial use of nearshore waters, as discussed further in Sections 3.1 Aesthetics, 3.15 Recreation , and 3.16 Transportation and Traffic.
- Noise Element. As noted in the noise analysis provided in Section 3.12 Noise, the increased noise resulting from the 2012 Project (traffic related, construction and operational) would result in a less-than-significant impact and mitigation is not warranted. Moreover, consistent with the City's Noise Ordinance and the Oakland Noise Element, the relevant SCA that would be required would further ensure that any potential impacts would be reduced to a less-than-significant level.
- Safety Element. The 2012 Project would not conflict with any of the above Safety Element policies. The project's specific effects regarding subjecting people and property to hazardous conditions are addressed in Sections 3.8 Hazards and Hazardous Materials and 3.9 Hydrology and Water Quality), all of which are less than significant or reduced to a less-than-significant level after implementation of mitigation measures or SCA.
- Historic Preservation Element (HPE). The policies from the Historic Preservation Element generally encourage, but do not mandate, the preservation of Oakland's historic resources, within the context of and consistent with other General Plan goals, objectives, and policies. There was one impact found to be potentially significant. Despite the imposition of a number of mitigation measures and SCA, it was still found to be significant and unavoidable, as it was for the project evaluated in the 2002 EIR. A more detailed discussion can be found in Section 3.5 Cultural Resources.
- Scenic Highways Element. The 2012 Project site is located within the MacArthur Freeway Scenic Corridor. As concluded in the 2002 EIR, development of the 2012 Project would eliminate visual evidence of a specific period in the history of West Oakland military transportation, and this impact would be considered significant and unavoidable. The 2012 Project would not result in any new or more significant impacts related to scenic resources than were described in the 2002 EIR, as discussed in detail in Section 3.1 Aesthetics.

  Scenic Highways Element Policies 1-4: a) discourage new billboards or other obstructions within Scenic Corridors; b) provide that interesting views should not be "obliterated"; and c) new construction within the Scenic Corridor should have architectural merit and be harmonious with the surrounding landscape. None of these policies are fundamental, mandatory

policies, but are directive in nature; and, as such, must be balanced against other policies that may compete with them (such as economic development and reuse of former military bases). Although views will be somewhat obscured, no interesting views will be obliterated. Moreover, the surrounding area is mostly devoid of any landscaping and is industrial in nature. The billboards will be constructed of quality materials and will have architectural merit. As such, the proposed billboards do not fundamentally conflict with the General Plan.

- **City of Oakland OARB Redevelopment Plan and Final Reuse Plan for the Oakland Army Base.** The *OARB Redevelopment Plan* incorporated the program for the former Army Base set forth in the *Final Reuse Plan for the OARB*. While there are some differences between the 2012 Project and what was proposed for the same geographic location in the 2002 Project, as noted in Section 1.0 Introduction and Section 2.0 Project Description, the proposed uses would be consistent with the Conceptual Reuse Strategy and Flexible Alternative set forth in the *Final Reuse Plan*. As noted above, the intent of the Flexible Alternative was to establish a broad envelope of probable land uses/market activities that could change over time in order to reflect market and economic conditions.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

d) Would the project fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan?

The project site is not currently subject to any adopted habitat conservation plan or natural community conservation plan. There is no adopted City of Oakland habitat conservation plan.

2002 Impact: The 2002 EIR did not address this impact.

2012 Impact: No Impact

2002 Mitigation: The 2002 EIR did not address this impact.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

3.10.6 CUMULATIVE IMPACTS

As described in this section, the 2012 Project would not result in significant land use impacts by potentially physically dividing an established community, or conflicting with surrounding land uses or a Habitat Conservation Plan. The 2012 Project is consistent with the City's General Plan Land Use designation for the site. The 2012 Project, in addition to any other proposed project included in the cumulative development, would not contribute to a significant cumulative land use impact.

3.10.7 CONCLUSIONS

Construction of the 2012 Project would result in a reduction in the amount of R&D/office development, which would reduce the land use conflict identified in the 2002 EIR. While General Plan policy generally encourages billboard removal in commercial and residential zones, installation of the billboards proposed as part of the 2012 Project would not conflict with the General Plan. In adopting the 2002 Base Plan, the City Council acknowledged the significant and unavoidable historical resource impact and where it was inconsistent with the General Plan, but nevertheless, adopted a Statement of Overriding Consideration. A policy conflict relating to loss of structures in a historic district would still apply to the 2012 Project; however, as noted above, the Planning Commission and City Council, in deciding whether to approve a proposed project, must decide whether, on balance, the project is consistent (i.e., in general harmony) with the General Plan. The fact that a specific project does not meet all General Plan goals, policies and objectives does not inherently result in a significant effect on the environment within the context of CEQA. The 2012 Project would not result in any new land use impacts not previously identified in the 2002 EIR.

3.10.8 REFERENCES

Association of Bay Area Governments, 1989. *The San Francisco Bay Trail Plan.* July.

Oakland, City of, 1974. *Scenic Highways, An Element of the Oakland General Plan.* September.

Oakland, City of, 1996. *Open Space, Conservation, and Recreation (OSCAR) Element*.

Oakland, City of, 1998. Community and Economic Development Agency, *Envision Oakland, City of Oakland General Plan, Land Use and Transportation Element, Volume 1*, March.

Oakland, City of, 2004. *General Plan, Safety Element*. November.

Oakland, City of, 2005. *General Plan, Noise Element*. June.

Oakland, City of, 2007. *Bicycle Master Plan*. December.

Oakland, City of, 2010. *Housing Element, 2007-2014.* November 17.

Oakland, City of, 2011. *Draft Energy and Climate Action Plan.* March 1.

San Francisco Bay Conservation and Development Commission and Metropolitan Transportation Commission, 1996. *San Francisco Bay Area Seaport Plan,* April 18, 1996, as amended through June 2007.

San Francisco Bay Conservation and Development Commission, 2008. *San Francisco Bay Plan.*

3.11 MINERAL RESOURCES

This section evaluates potential mineral resources impacts of the 2012 Project. Mineral resources were not addressed in the 2002 EIR and are addressed herein. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not mitigation measures are required.

3.11.1 PRIOR ANALYSIS AND CONCLUSIONS

The 2002 EIR did not address mineral resources.

3.11.2 STANDARD CONDITIONS OF APPROVAL

There are no Standard Conditions of Approval relating to mineral resources that apply to this project.

3.11.3 UPDATED REGULATORY SETTING

As the 2002 EIR did not address mineral resources, there is no update to the regulatory setting. The State Mining and Geology Board identifies mineral resources of statewide importance and the City of Oakland General Plan identifies mineral resources of City or regional importance.[123,124]

3.11.4 EXISTING CONDITIONS

The project site is located in an urban industrial setting. There are no areas of mineral mining located within or in the vicinity of the project site.

3.11.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State; or

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

These criteria are discussed below.

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

The State Mining and Geology Board has not classified the project area as containing mineral deposits which are of statewide significance. Implementation of the 2012 Project would not result in the loss of availability of a known mineral resource.

[123] California Department of Conservation, 2012. State Mining and Geology Board (SMGB). *Statutes and Regulations*. Website: www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx (accessed March 29).

[124] Oakland, City of, 1994. *City of Oakland General Plan: Open Space, Conservation, and Recreation (OSCAR) Element*. June.

2002 Impact: Mineral Resources Not Addressed in 2002 EIR

2012 Impact: No Impact

2002 Mitigation: Mineral Resources Not Addressed in 2002 EIR

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The project site is not delineated as containing a locally-important mineral resource in any land use plan.

2002 Impact: Mineral Resources Not Addressed in 2002 EIR

2012 Impact: No Impact

2002 Mitigation: Mineral Resources Not Addressed in 2002 EIR

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

3.11.6 CUMULATIVE IMPACTS

The State Mining and Geology Board has designated the Leona Rhyolite deposits between Claremont Canyon and the San Leandro border as a Regionally Significant Resource. There are no active quarries in the City of Oakland. The State Mining and Geology Board has not classified any other area in Oakland as containing mineral deposits which are of statewide significance. Implementation of the 2012 Project would not result in any impacts to mineral resources; nor would the 2012 Project contribute to any cumulative mineral resources impact in the region.

3.11.7 CONCLUSIONS

As discussed above, there would be no impact to mineral resources and no mitigation measures are required. There are no changes in the project, change in circumstances, or new information that would result in new significant environmental effects on mineral resources, or a substantial increase in the severity of a previously identified significant environmental effect on mineral resources.

3.11.8 REFERENCES

California Department of Conservation, 2012. State Mining and Geology Board (SMGB). *Statutes and Regulations*. Website: www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx (accessed March 29).

Oakland, City of, 1994. *City of Oakland General Plan: Open Space, Conservation, and Recreation (OSCAR) Element*. June.

3.12 NOISE

This section evaluates the potential noise impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant noise impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant noise impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.12.1 PRIOR ANALYSIS AND CONCLUSIONS

3.12.1.1 2002 EIR Impact Findings

The 2002 EIR concluded a potentially significant impact related construction-related noise levels, which could be reduced to a less-than-significant level:

> **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 concluded that the 2002 Project would have a less-than-significant impact on operational ambient noise levels:

> **Impact 4.5-2:** Operation of redevelopment facilities could result in a long-term increase in ambient noise levels.

3.12.1.2 2002 EIR Mitigation Measures

For the potentially significant impact related to short-term noise levels during construction and remediation activities on the project site, the 2002 EIR identified the following mitigation measure to reduce the impact to a less-than-significant level:

> **Mitigation Measure 4.5-1:** Developers and/or contractors shall develop and implement redevelopment-specific noise reduction plans.

3.12.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012

Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

SCA NOI-1: Days/Hours of Construction Operation[125]
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 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.

[125] Typically, only limited construction activities are permitted on Saturdays; however, given the location of the project, the distance from the project construction areas to the nearest residential land uses, and the existing noise environment in the project vicinity, Saturday construction as well as use of barges at all times for a 15-month construction period, is appropriate.

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.

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-4: Interior Noise
Prior to issuance of a building permit and Certificate of Occupancy

If necessary to comply with the interior noise requirements of the City of Oakland's General Plan Noise Element and achieve an acceptable interior noise level, noise reduction in the form of sound-rated assemblies (i.e., windows, exterior doors, and walls), and/or other appropriate features/measures, shall be incorporated into project building design, based upon recommendations of a qualified acoustical engineer and submitted to the Building Services Division for review and approval prior to issuance of building permit. Final recommendations for sound-rated assemblies, and/or other appropriate features/measures, will depend on the specific building designs and layout of buildings on the site and shall be determined during the design phases. Written confirmation by the acoustical consultant, HVAC or HERS specialist, shall be submitted for City review and approval, prior to Certificate of Occupancy (or equivalent) that:

a) Quality control was exercised during construction to ensure all air-gaps and penetrations of the building shell are controlled and sealed; and

b) Demonstrates compliance with interior noise standards based upon performance testing of a sample unit.

c) Inclusion of a Statement of Disclosure Notice in the CC&R's on the lease or title to all new tenants or owners of the units acknowledging the noise generating activity and the single event noise occurrences. Potential features/measures to reduce interior noise could include, but are not limited to, the following:

i) Installation of an alternative form of ventilation in all units identified in the acoustical analysis as not being able to meet the interior noise requirements due to adjacency to a noise generating activity, filtration of ambient make-up air in each unit and analysis of ventilation noise if ventilation is included in the recommendations by the acoustical analysis.

ii) Prohibition of Z-duct construction.

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 90dBA, 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.

3.12.3 UPDATED REGULATORY SETTING

Since adoption of the 2002 EIR, The City of Oakland has updated both the Noise Element of the General Plan[126] and the Noise Ordinances of the Municipal Code.[127] The 2012 Project must comply with current regulations; a summary of updated regulations is presented below.

Locally, the City of Oakland addresses noise in the City's General Plan Noise Element, the Municipal Code Noise Ordinances, and in the Standard Conditions of Approval.

City of Oakland's General Plan Noise Element. The City of Oakland adopted a revised Noise Element in June of 2005.

The City has also established normally acceptable exterior noise thresholds for new residential and new commercial land use development of 60 dBA L_{dn} and 65 dBA L_{dn} respectively. As shown in Table 3.12-1, for proposed industrial uses, noise levels exceeding 70 dBA L_{dn} but less than 80 dBA L_{dn} are considered conditionally acceptable; while noise levels exceeding 80 dBA L_{dn} are considered normally unacceptable for new industrial land uses.

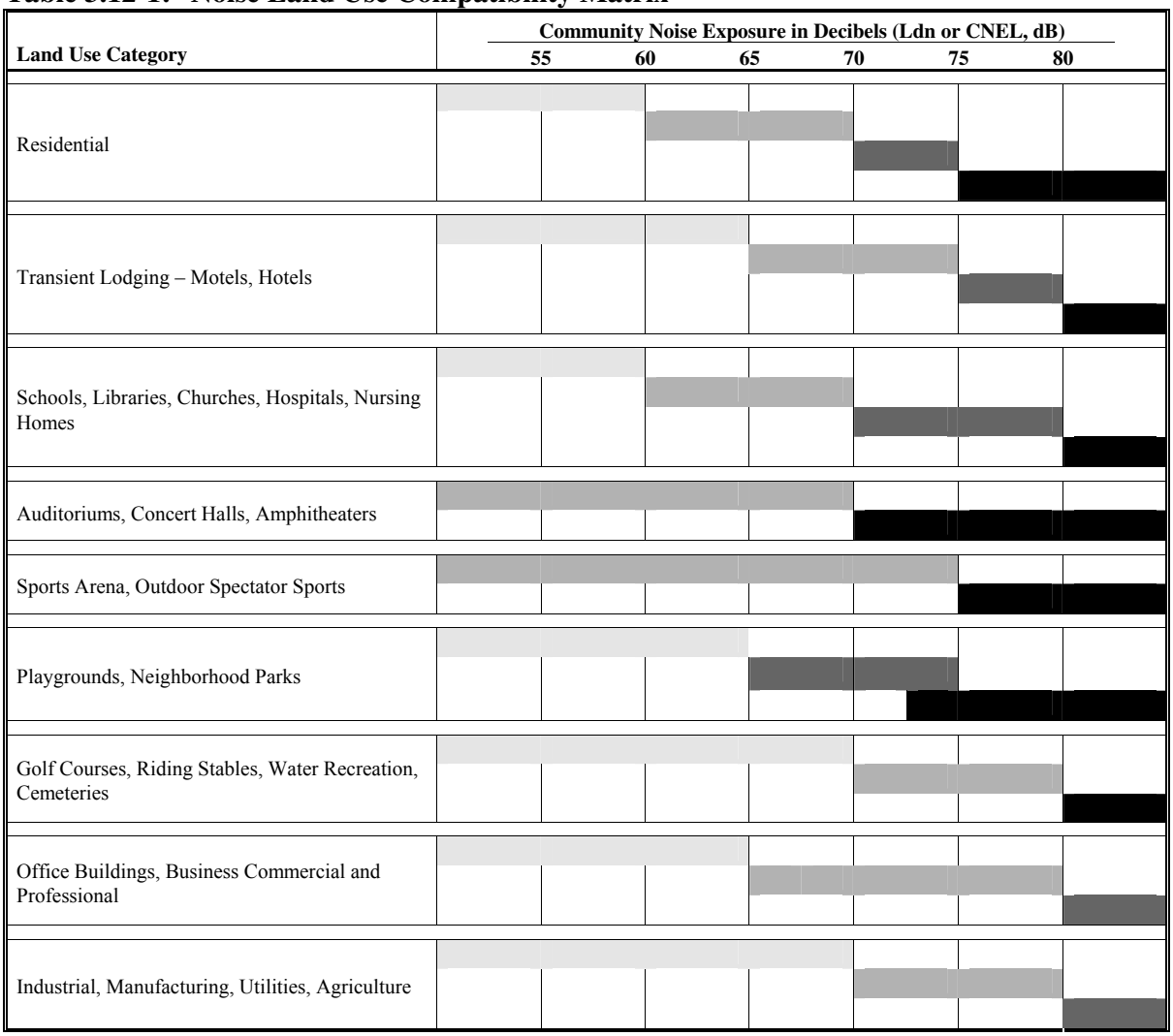
The following are the noise policies and action steps of the Noise Element and other elements of the General Plan that are applicable to the proposed project.

- Policy 1: Ensure the compatibility of existing and, especially, of proposed development projects not only with neighboring land uses but also with their surrounding noise environment.
  - Action 1.1: Use the noise-land use compatibility matrix (Figure 6 *of the Noise Element [Table 3.12-1 following]*) in conjunction with the noise contour maps (especially for roadway traffic) to evaluate the acceptability of residential and other proposed land uses and also the need for any mitigation or abatement measures to achieve the desired degree of acceptability.
  - Action 1.2: Continue using the City's zoning regulations and permit processes to limit the hours of operation of noise-producing activities which create conflicts with residential uses and to attach noise-abatement requirements to such activities.
- Policy 2: Protect the noise environment by controlling the generation of noise by both stationary and mobile noise sources.
- Policy 3: Reduce the community's exposure to noise by minimizing the noise levels that are *received* by Oakland residents and others in the City. (This policy addresses the *reception* of noise whereas Policy 2 addresses the *generation* of noise.)
  - Action 3.1: Continue to use the building-permit application process to enforce the California Noise Insulation Standards regulating the maximum allowable interior noise level in new multi-unit buildings.

[126] Oakland, City of, 2005. *City of Oakland General Plan.* June.

[127] Oakland, City of, 2008. *Oakland Municipal Code.* Section 17.120 and Section 8.18.

Table 3.12-1: Noise Land Use Compatibility Matrix



NORMALLY ACCEPTABLE
Development may occur without an analysis of potential noise impacts *to the proposed development* (though it might still be necessary to analyze noise impacts that the project might have *on its surroundings*).

CONDITIONALLY ACCEPTABLE
Development should be undertaken only after an analysis of noise-reduction requirements is conducted, and if necessary noise-mitigating features are included in the design. Conventional construction will usually suffice as long as it incorporates air conditioning or forced-air-supply systems, though it will likely require that project occupants maintain their windows closed.

NORMALLY UNACCEPTABLE
Development should generally de discouraged; it may be undertaken only if a detailed analysis of the noise-reduction requirements is conducted, and if highly effective noise insulation, mitigation or abatement features are included in the design.

CLEARLY UNACCEPTABLE
Development should not be undertaken.

Source: Oakland, City of, 2005. *City of Oakland General Plan, Noise Element, Figure 6.* June.

- Action 3.2: Review the City's noise performance standards and revise them as appropriate to be consistent with City Council policy.
- Action 3.3: Demand that Caltrans implement sound barriers, building retrofit programs and other measures to mitigate to the maximum extent feasible noise impacts on residential and other sensitive land uses from any new, widened or upgraded roadways; any new sound barrier must conform with City policies and standards regarding visual and aesthetic resources and quality.

- Policy I/C4.2: Minimizing nuisances. The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls.

City of Oakland Municipal Code Noise Ordinances. The noise ordinances of the City's Municipal Code,[128] updated in 2008, also regulate the maximum allowable daytime average receiving noise level for construction activity. These noise level thresholds are shown in Table 3.12-2 and are distinguished in terms of the duration of the exposure (i.e., less/more than 10 days).

Table 3.12-2: City of Oakland Construction Noise Standards at Receiving Property Line, dBA[1]

Receiving Land Use	Maximum Allowable Noise Level (dBA)	
	Daily 7:00 a.m. to 7:00 p.m.	Weekends 9:00 a.m. to 8:00 p.m.
Less than 10 days[a]		
Residential	80	65
Commercial, Industrial	85	70
More than 10 days[b]		
Residential	65	55
Commercial, Industrial	70	60

[1] If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

Source: City of Oakland.

Municipal Code 17.120.060 outlines the City of Oakland's performance standards with regard to residential development exposed to groundborne vibration. The code restricts all activities outside of the M-40 and M-30 zones from creating a vibration that would be perceptible without instruments by the average person at or beyond any lot line of the lot containing such activities. Groundborne vibration caused by motor vehicles, trains, and temporary construction or demolition work is exempt from this standard.

The City's maximum allowable operational noise level standards for residential and commercial land uses in terms of percentile exceedance are shown in Table 3.12-3.

3.12.4 EXISTING CONDITIONS

3.12.4.1 Location

The Oakland Army Base site is located in western Oakland, partially along the eastern shoreline of San Francisco Bay. This is the westernmost portion of West Oakland. The project area is located approximately two miles west of the central business district. The project area is bounded by the following:

- To the north is Interstate 80 (I-80), and the Bay Bridge touchdown and Bay Bridge Toll Plaza; beyond is the Bay.

[128] Oakland, City of, 2011. *Oakland Municipal Code.* Section 17.120 and Section 8.18. November 15.

- To the northeast is the East Bay Municipal Utility District (EBMUD) Main Wastewater Treatment Plant (MWWTP), a large, region-serving industrial sewage treatment facility. Beyond the MWWTP are those portions of Interstates 80, 580 and 880 known as the "MacArthur maze", and farther beyond is the City of Emeryville. To the east and southeast is the Union Pacific railyard.
- To the southwest is the Port's Joint Intermodal Rail Terminal and farther beyond are Port marine terminals, Middle Harbor Shoreline Park, and the Oakland Estuary. Beyond the estuary is the former Naval Air Station Alameda in the City of Alameda, another closed military installation, which is now named Alameda Point.
- To the west is the Port of Oakland's Berths 20-26 marine terminal and the site of the proposed New Berth 21 marine terminal.

Table 3.12-3: City of Oakland Operational Noise Standards at Receiving Property Line, dBA[1]

Receiving Land Use	Cumulative No. of Minutes in a 1-Hr Period [2]	Maximum Allowable Noise Level (dBA)	
		Daytime 7:00 a.m. to 10:00 p.m.	Nighttime 10:00 p.m. to 7:00 a.m.
Residential and Civic [3]	20 (L_{33})	60	45
	10 ($L_{16.7}$)	65	50
	5 ($L_{8.3}$)	70	55
	1 ($L_{1.7}$)	75	60
	0 (L_{max})	80	65
Anytime			
Commercial	20 (L_{33})	65	
	10 ($L_{16.7}$)	70	
	5 ($L_{8.3}$)	75	
	1 ($L_{1.7}$)	80	
	0 (L_{max})	85	
Manufacturing, Mining, and Quarrying	20 (L_{33})	70	
	10 ($L_{16.7}$)	75	
	5 ($L_{8.3}$)	80	
	1 ($L_{1.7}$)	85	
	0 (L_{max})	90	

1 These standards are reduced 5 dBA for simple tone noise, noise consisting primarily of speech or music, or recurring impact noise. If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

2 L_x represents the noise level that is exceeded X percent of a given period. L_{max} is the maximum instantaneous noise level.

3 Legal residence, schools and childcare facilities, health care or nursing home, public open space, or similarly sensitive land uses.

Source: City of Oakland.

The area around the Oakland Army Base Redevelopment Area is urbanized and generally industrial with some vacant or underdeveloped parcels. The closest off-site noise sensitive land uses are the residential and church land uses located on Pine Street and Goss Street east of the project site. These land uses are located approximately 750 feet from the nearest project boundary line (the southeast corner of the project area). Other nearby noise sensitive receptors to the project site include the multi-family residential land uses located in the southeast quadrant of Frontage Road and 14th Street, with the nearest façade located approximately 800 feet from the project's eastern border. All of these noise sensitive land uses are located east of the intervening structures of Interstate 880 (I-880) and the existing sound barriers that are located along this portion of I-880.

The nearest airports to the project site are the Oakland International Airport and the San Francisco International Airport. These airports are located approximately 6.8 miles southeast and 15.3 miles southwest of the project site, respectively. As was noted in the 2002 EIR, while the project area is located within the General Referral Area of the ALUPP of the Oakland International Airport, it is not located within a Noise or Safety Referral Zone. The proposed project site is not located within the vicinity of a private airstrip.

3.12.4.2 Existing Noise Environment

The dominant noise sources on the project site are traffic, port operations, railroad, and BART noise sources. As documented in the 2002 EIR, the hourly daytime and evening noise levels on the project site ranged from 62 dBA to 68 dBA 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 on the project site ranged from approximately 64 dBA to 68 dBA L_{dn}. The City's noise contours in the Noise Element of the General Plan show that traffic noise levels along I-880 adjacent to the project site ranges up to 80 dBA L_{dn} as measured at 150 feet from the roadway centerline. The noise contours for UPRR and BART rail lines is shown to attenuate to 70 dBA L_{dn} at 280 feet from the centerline of the tracks.

3.12.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts:[129]

   During the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard (shown in Table 3.12-3);

b) Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise;

c) Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise;

d) 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[130] permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project);

e) Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwelling) per California Noise Insulation Standards (CCR Part 2, Title 24);

f) Expose the project to a community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval;

g) Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupation Health and Safety Administration (OSHA));

h) 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;

[129] The acoustical analysis must identify at a minimum a) the types of construction equipment expected to be used and the noise levels typically associated with the construction equipment and b) the surrounding land uses including any sensitive land uses (e.g., schools and childcare facilities, health care and nursing homes, public open space). If sensitive land uses are present, the acoustical analysis must recommend measures to reduce potential impacts.

[130] Outside of a laboratory, a 3 dBA change is considered a just-perceivable difference. Therefore, a 3 dBA was used to determine if the project-related noise increases would be cumulative considerable.

i) Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels; or

j) Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels.

These criteria are discussed below.

a) Would the 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 noise levels would increase within the redevelopment project area and adjacent areas from operation of construction equipment. However, the 2002 EIR determined that construction noise impacts could not be fully quantified because details of redevelopment construction (such as equipment to be used, its proximity to receptors, etc.) were not fully defined. Because occurrence of this impact relied on details of construction not completely defined, the impact was considered potentially significant. The 2002 EIR concluded that, with implementation of Mitigation Measure 4.5-1, the project would meet the standards of the Noise Ordinance, and the residual impact would be considered less than significant.

The closest off-site sensitive land uses are the residential and church land uses located on Pine Street and Goss Street east of the project site. These land uses are located approximately 750 feet from the nearest project boundary line and east of the intervening structures of I-880 and the existing sound barriers that are located along this portion of I-880.

Table 3.12-4 lists typical maximum noise levels for various pieces of construction equipment, as measured at a distance of 50 feet from the operating equipment. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. As noted in the 2002 EIR, the site preparation phase would generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Demolition and excavation activities are anticipated to include the use of bulldozers, backhoes, draglines, and front loaders. Earthmoving and earth compacting activates are expected to include the use of crane-operated deep dynamic compactors, roller compactors, scrapers, and graders.

Table 3.12-4: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Range of Maximum Sound Levels (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Pile Drivers	81 to 96	93
Rock Drills	83 to 99	96
Jackhammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	74 to 84	80
Scrapers	83 to 91	87
Haul Trucks	83 to 94	88
Cranes	79 to 86	82
Portable Generators	71 to 87	80
Rollers	75 to 82	80
Dozers	77 to 90	85
Tractors	77 to 82	80
Front-End Loaders	77 to 90	86
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 89	86
Trucks	81 to 87	86

Source: Bolt, Beranek & Newman, 1987. *Noise Control for Buildings and Manufacturing Plants*.

Maximum noise levels associated with operation of multiple pieces of heavy construction equipment, including pile drivers or crane-operated deep dynamic compactors and earthmoving equipment, can range up to 96 dBA L_{max} at 50 feet from the operating equipment. Dynamic compaction consists of systematically lifting and dropping a heavy weight from a crane in pre-determined 10 to 25 foot on-center grids. The weights, generally weighing from 6 to 30 tons, are dropped onto a ground surface from heights of 30 to 80 feet in order to densify the underlying soils. The noise generated would be a low, deep "thud" of a heavy object being dropped on soil. It is not the higher pitched noise of pile driving where metal is striking metal. Maximum noise levels during operation of the crane-operated deep dynamic compactors can typically range up to 85 dBA L_{max} as measured at 50 feet from the operating equipment.

At a distance of 750 feet, noise levels from the operation of multiple pieces of heavy construction equipment, including crane-operated deep dynamic compactors, would attenuate to below 73 dBA L_{max}. Intervening structures of I-880 and existing sound barriers would be expected to reduce these noise levels even further by a minimum of 10 dBA at the nearest receiving sensitive land uses, thus resulting in maximum noise levels of up to 63 dBA L_{max}. The City's noise contours in the Noise Element of the General Plan show that traffic noise levels along I-880 adjacent to the project site ranges up to 80 dBA L_{dn} as measured at 150 feet from the roadway centerline; such noise levels are higher than the projected maximum construction noise levels from the project site during daytime construction hours. Therefore, due to the distance of these land uses from the project boundary and the presence of these intervening structures, construction noise levels would not be expected to result in a violation of the City's noise ordinance section 17.120.050 regarding construction noise.

The 2012 Project would be required to implement the noise related SCA listed above in section 3.12.2. Compliance with the SCA would ensure that construction noise impacts associated with build out of the project would be reduced to less-than-significant levels for all receiving land uses in the project vicinity. Therefore, implementation of the proposed project would not result in a violation of the City's Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, and no mitigation would be required.

2002 Impact: Potentially Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.5-1 *[Note: This mitigation measure is applicable to the 2012 Project, but is no longer required.]*

2012 Mitigation: No Mitigation Warranted; Implementation of SCA NOI-1, SCA NOI-2, SCA NOI-3, and SCA NOI-6 would further reduce construction noise impacts.

Significance After Implementation: Less Than Significant (No New Impact)

b) Would the project generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise?

As stated in the preceding impact criterion discussion, construction noise levels associated with build out of the 2012 Project could range up to a maximum of up to 63 dBA L_{max} as measured at the nearest off-site receiving noise sensitive land use, which is lower than existing maximum noise levels generated by area sources such as traffic. In addition, implementation of the City's SCA would be required.

Compliance with the SCA would ensure that construction noise impacts associated with build out of the project would be reduced to a less-than-significant level for all receiving land uses in the project vicinity. Therefore, implementation of the proposed project would not result in a violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.5-1 *[Note: This mitigation measure is applicable to the 2012 Project, but is no longer required.]*

2012 Mitigation: No Mitigation Warranted; Implementation of SCA NOI-1, SCA NOI-2, SCA NOI-3, and SCA NOI-6 would further reduce construction noise impacts.

Significance After Implementation: Less Than Significant (No New Impact)

c) Would the project generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise?

The City's operational noise standards as measured at receiving property lines are summarized in Table 3.12-3 of this section. Noise sources associated with implementation of the 2012 Project would include operation of heavy-duty trucks, trains, ships, cargo equipment, and other cargo operations associated with off-loading, unloading, and loading of ships, trucks, and trains. Of the on-site stationary noise sources, noise generated by ship, rail, and truck loading and unloading activities would be anticipated to generate the highest maximum noise levels. Maximum noise levels from typical loading and unloading activities can range up to 85 dBA L_{max} at 50 feet. The project site is bordered to the north by I-80 and the EBMUD Main Wastewater Treatment Plant; to the east and south is the UPRR, which in turn is bordered to the east by I-880 and light-industrial land uses; to the southwest is the Port's Joint Intermodal Rail Terminal and farther beyond is the Oakland Estuary. These land uses are noise generators, and operation of the proposed project is not expected to result in exceedances of the ambient noise levels currently experienced at these properties. In addition, as shown in the operational noise impact analysis in the 2002 EIR, traffic noise associated with the 2002 Project would not result in an increase of 5 dBA or greater in traffic noise levels along any modeled roadway segment in the project vicinity. The City's roadway noise contours show that traffic noise levels along I-880 adjacent to the project site range up to 80 dBA L_{dn} as measured at 150 feet from the roadway centerline; these levels at the nearest off-site sensitive receptors would be higher than the noise levels from project operational noise sources. As noted previously, the 2012 Project would result in less development than that which was evaluated in the 2002 EIR. Therefore, it can conservatively be assumed that the resulting operational noise impacts would similarly result in a less-than-significant impact as measured at all adjacent receiving land uses.

The nearest residential land uses are located over 750 feet from the nearest project boundary line, beyond the intervening structures of I-880 and existing sound barriers. However, the nearest project operational facility would be over 1,000 feet from the nearest residential land uses. It should be noted that noise levels at these land uses are expected to continue to be dominated by noise from traffic and BART. Therefore, due to the distance attenuation, presence of intervening structures, and current noise sources, it is expected that operational noise associated with implementation and build out of

the 2012 Project would not result in a violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise as measured at all adjacent receiving land uses.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA NOI-4 and SCA NOI-5 would further reduce operational noise impacts.

Significance After Implementation: Less Than Significant (No New Impact)

d) Would the project 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)?

As shown in the operational noise impact analysis in the 2002 EIR, traffic noise associated with the 2002 Project would not result in an increase of 5 dBA or greater in traffic noise levels along any modeled roadway segment in the project vicinity. As noted previously, the 2012 Project would result in less development than that which was evaluated in the 2002 EIR. Noise levels at land uses in the project vicinity are expected to continue to be dominated by noise from traffic, railroad, and BART, and project operational noise levels would not be anticipated to exceed existing ambient noise levels at the nearest off-site sensitive receptors. A doubling of a sound source with equal strength would be necessary to increase the noise level by 3 dBA. As implementation of the 2012 Project would not result in such a doubling of noise sources in the project vicinity, 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.

Therefore, implementation of the 2012 Project is not expected to result in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA NOI-4 and SCA NOI-5 would further reduce operational noise impacts.

Significance After Implementation: Less Than Significant (No New Impact)

e) Would the project expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwelling) per California Noise Insulation Standards (CCR Part 2, Title 24)?

The interior CNEL criterion does not apply to the 2012 Project because the project would not include the development of residential, lodging, or long-term care facilities land uses. In addition, SCA NOI-4 requires installation of an alternative form of ventilation in all units identified in the acoustical analysis as not being able to meet the interior noise requirements. Subsequent off-site redevelopment activities would be required to comply with State laws and regulations, and impacts would be avoided. Therefore, implementation of the 2012 Project would not expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities.

2002 Impact: No Impact

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA NOI-4 and SCA NOI-5 would further reduce potential impacts to multi-family dwellings, hotels, motels, dormitories, and long-term care facilities.

Significance After Implementation: No Impact (No New Impact)

f) Would the project be exposed to a community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval?

According to the City's land use compatibility standards shown in Table 3.12-1, community noise environments with ambient noise levels of up to 70 dBA L_{dn} are considered normally acceptable for new industrial land use development; while environments with ambient noise levels of up to 80 dBA L_{dn} are considered conditionally acceptable for new industrial land uses. The dominant noise sources on the project site include traffic, port operations, railroad operations, and BART trains. As documented in the 2002 EIR, the hourly daytime and evening noise levels on the project site ranged from 62 dBA to 68 dBA L_{eq}; nighttime hourly noise levels ranges from 49 dBA to 68 dBA L_{eq}. The 24-hour weighted average noise levels that were documented on the project site ranged from approximately 64 dBA to 68 dBA L_{dn}. The City's noise contours in the Noise Element of the General Plan show that traffic noise levels along I-880 adjacent to the project site ranges up to 80 dBA L_{dn} as measured at 150 feet from the roadway centerline. The noise contours for UPRR and BART rail lines are shown to attenuate to 70 dBA L_{dn} at 280 feet from the centerline of the tracks. The nearest project border is located approximately 90 feet from the UPRR railroad centerline; thus, portions of the project site nearest the rail line would be exposed to noise levels ranging up to approximately 79 dBA L_{dn}.

These on-site documented noise levels are within the City's conditionally acceptable range for the 2012 project development of new industrial land uses. According to the City's guidelines shown in

Table 3.12-1, for conditionally acceptable noise environments, development should be undertaken only after an analysis of noise-reduction requirements is conducted, and if necessary noise-mitigating features are included in the design. The standards further note that conventional construction will usually suffice as long as it incorporates air conditioning or forced-air-supply systems, though it will likely require that project occupants maintain their windows closed. However, the proposed land uses that would be located within the 70 dBA L_{dn} noise contour of the rail line would be transload warehouse buildings, exterior parking and cargo storage areas. These uses would not be considered sensitive receptors or areas of frequent human use; thus implementation of the project would not result in exposure of persons to community noise levels in conflict with the land use compatibility guidelines. In addition, implementation of all applicable SCA would further reduce any potential conflicts with the land use compatibility guidelines to a less-than-significant level.

2002 Impact: No Impact

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA NOI-4 and SCA NOI-5 would further reduce potential conflicts with land use compatibility guidelines.

Significance After Implementation: No Impact (No New Impact)

g) Would the project expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of OSHA)?

As discussed previously, due to the distance attenuation, presence of intervening structures, and existing noise sources, it is expected that operational noise associated with implementation and build out of the 2012 Project would not result in a violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise. Implementation of the 2012 Project would not expose persons to interior noise levels in excess of the State's Noise Insulation Standards (CCR Part 2, Title 24). The project would not be exposed to a community noise in conflict with the land use compatibility guidelines of the Oakland General Plan. Therefore, implementation of the 2012 Project would not result in an exceedance of the applicable standards of these regulatory agencies.

Adherence to required federal and State standards for on-road vehicles, including muffler regulations, would further ensure that noise from construction traffic will remain less than significant. In addition, SCA NOI-2 requires utilization of the best available noise control techniques for construction equipment, including, but not limited to, improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, and where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust, wherever feasible. Therefore, implementation of this SCA would further ensure that noise from construction traffic and equipment would remain less than significant and not result in an exceedance of the City's applicable Noise Ordinance standards.

For avoiding adverse effects on human physical and mental health in the workplace or in communities, OSHA requires the protection of workers from hearing loss when the noise exposure equals or

exceeds an 8-hour time-weighted average of 85 dBA.[131] Operations associated with build-out of the proposed project are not expected to exceed this standard and would be subject to the OSHA standards.

Noise generated by ship, rail, and truck loading and unloading activities would be expected to generate some of the highest maximum noise levels from stationary noise sources associated with the proposed land uses. Typical loading and unloading activities can result in maximum noise levels ranging up to 85 dBA L_{max} at 50 feet. Such noise levels, when averaged over an 8-hour time period, would not result in exceedances of OSHA's standards. Therefore, implementation of the proposed project would not result in an exceedance of OSHA's applicable standards.

2002 Impact: No Impact

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA NOI-5 would further reduce noise level impacts associated with applicable standards established by a regulatory agency.

Significance After Implementation: Less Than Significant (No New Impact)

h) Would the project, during either project construction or project operation, expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA)?

Similar to the project evaluated in the 2002 EIR, the nearest redevelopment activity that could result in vibration due to operations of the 2012 Project would be the intermodal rail yard. The proposed location of this facility would be approximately 1,100 feet from the nearest residential land use, with intervening structures of I-880 and existing sound barriers. Due to the distance to any off-site sensitive receptor, vibration generated by operational activities at the rail yard would not be perceptible at the nearest residential receptors.

Construction activities can also be a source of groundborne vibration. The operation of heavy construction equipment is a potential source of groundborne vibration. Demolition and excavation activities are anticipated to include the use of bulldozers, backhoes, draglines, and front loaders. Earthmoving and earth compacting activities are expected to include the use of crane-operated deep dynamic compactors, roller compactors, scrapers, and graders. Construction-related groundborne vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). The operation of deep dynamic compaction equipment would generate the highest ground-borne vibration levels of the types of equipment and techniques anticipated to be used on the project site. Dynamic compaction consists of dropping a heavy weight onto a ground surface from heights of up to 80 feet to densify the underlying soils. At a distance of 200 feet, vibration levels from operation of deep dynamic compaction equipment would attenuate to below the construction vibration damage

[131] Occupational Safety & Health Administration. *Regulations, Standards 29 CFR, Occupational Noise Exposure 1910.95*.

threshold of 0.2 PPV for buildings of typical non-engineered timber and masonry construction. As there are no existing off-site sensitive structures within 200 feet of proposed construction areas where deep dynamic compaction would occur, this potential impact would be considered less-than-significant and no mitigation would be required. In addition, implementation of SCA NOI-2, SCA NOI-5 and SCA NOI-6 would further ensure that any potential vibration impacts from construction activities would be reduced to a less-than-significant level.

Table 3.12-5: Typical Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate VdB at 25 feet
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Vibratory roller		0.210	94
Hoe ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment.* May.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA NOI-1, SCA NOI-2, SCA NOI-3, and SCA NOI-6 would further reduce potential vibration impacts.

Significance After Implementation: Less Than Significant (No New Impacts)

i) Would the project be located within an airport land use plan and expose people residing or working in the project area to excessive noise levels?

The 2012 Project site is not located within or in the vicinity of an airport land use plan or within the 55 dBA CNEL noise contour of any airport. The nearest airports to the project site are the Oakland International Airport and the San Francisco International Airport. These airports are located approximately 6.8 miles southeast and 15.3 miles southwest of the project site, respectively. As was noted in the 2002 EIR, while the project area is located within the General Referral Area of the ALUPP of the Oakland International Airport, it is not located within a Noise or Safety Referral Zone. Therefore, implementation of the project would not expose persons residing or working in the project area to excessive noise levels from aircraft noise sources. Therefore, project-related impacts from aircraft noise sources would be less-than-significant.

2002 Impact: No Impact

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impacts)

j) Would the project be located within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?

The 2012 Project site is not located within the vicinity of a private airstrip. Therefore, implementation of the project would not expose persons residing or working in the project area to excessive noise levels from aircraft noise sources. Therefore, project-related impacts from aircraft noise sources would be less than significant.

2002 Impact: No Impact

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impacts)

3.12.6 CUMULATIVE IMPACTS

Similar to the discussion above of project impacts under existing conditions, build out of the 2012 Project would result in a significant noise impact if the project-related noise levels would result in an exceedance of the City's normally acceptable standards or if it would result in a substantial permanent increase in ambient noise levels compared to conditions without the project.

The project would not be exposed to community noise in conflict with the land use compatibility guidelines. In addition, implementation of all applicable Standard Conditions of Approval would further reduce any potential conflicts with the land use compatibility guidelines to a less-than-significant level. Similarly, implementation of the 2012 Project would not result in a doubling of noise sources in the project vicinity; therefore, ambient noise levels in the project vicinity would not be expected to result in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

The project would not result in a substantial permanent increase in ambient noise levels compared to noise levels existing without the project. As stated in the impact criterion discussion 3.12.5b, construction noise levels associated with build out of the 2012 Project could range up to a maximum of up to 63 dBA L_{max} as measured at the nearest off-site receiving noise sensitive land use. As these noise levels are lower than existing maximum noise levels generated by area sources such as traffic, they would not contribute by any perceptible amount to cumulative noise levels associated with additional construction activities of other projects in the project vicinity. In addition, impacts from construction noise simultaneously occurring at two or more sites, would be reduced to less than significant with implementation of the City's SCA. Compliance with the SCA applicable to construction hours of operation, noise control, noise complaint procedures, and pile driving and other extreme noise generators, would ensure that all projects on the cumulative project list comply with the City's Noise Ordinance.

Therefore, implementation of the 2012 Project would not result in a significant contribution to the cumulative noise environment, and cumulative noise impacts would be considered less than significant. No mitigation would be required.

3.12.7 CONCLUSIONS

Similar to the 2002 EIR, the only significant noise impact identified for the 2012 Project would occur from construction activities associated with build out of the project. However, implementation of the Standard Conditions of Approval would ensure that construction noise impacts associated with build out of the project would be reduced to less-than-significant levels for all receiving land uses in the project vicinity. Therefore, implementation of the 2012 Project would not result in a violation of the City's Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, and no mitigation would be required.

3.12.8 REFERENCES

Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment.* May.

Oakland, City of, 2005. *City of Oakland General Plan, Noise Element*. June.

Oakland, City of, 2008. *Oakland Municipal Code*. Section 17.120 and Section 8.18.

Oakland, City of, 2011. *Oakland Planning Code*. November 15.

Occupational Safety & Health Administration. *Regulations, Standards 29 CFR, Occupational Noise Exposure 1910.95*.

State of California. CCR Part 2, Title 24. Noise Insulation Standards.

U.S. Environmental Protection Agency, 1974. "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety." March.

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3.13 POPULATION, HOUSING AND EMPLOYMENT

This section evaluates the potential population, housing and employment impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant population, housing and employment impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant population, housing and employment impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.13.1 PRIOR ANALYSIS AND CONCLUSIONS

The 2002 EIR did not identify any significant population, housing and employment impacts. The 2002 EIR concluded that the 2002 Project would have a less-than-significant impact on population growth:

> **Impact 4.8-1:** Redevelopment could induce population growth in Oakland.

The 2002 EIR included a description of how redevelopment of the project area would occur under a tax increment financing framework, which could make additional money available for affordable housing in Oakland. Housing was proposed within the 16th/Wood sub-area (part of the 2002 Project area but not part of the 2012 Project area), but no housing was proposed in the OARB sub-area.

Redevelopment associated with the 2002 Project would increase the number of jobs in West Oakland; it was anticipated to generate 14,270 direct jobs, and 29,700 indirect/induced jobs. It was anticipated that 5,626 jobs would be located within the OARB sub-area, the 2002 EIR did not identify any significant impacts associated with employment.

The 2002 EIR anticipated that population growth associated with the 2002 Project would represent approximately 5.5 percent of the population growth anticipated in the City of Oakland by 2020, and would not be considered a significant impact.

3.13.2 STANDARD CONDITIONS OF APPROVAL

There are no Standard Conditions of Approval related to population, housing and employment.

3.13.3 UPDATED REGULATORY SETTING

3.13.3.1 Dissolution of the Oakland Redevelopment Agency

As noted in the 2002 EIR, under California Community Redevelopment Law, 20 percent of the tax increment generated annually by redevelopment projects within a jurisdiction was to be used to increase, improve, and preserve the community's supply of affordable housing for persons of low and moderate income. The agency was obligated to dedicate at least 20 percent of the total annual increment to housing from all project areas within its jurisdiction (called the housing "set-aside"). In

addition, the Agency had discretion over the appropriate location of housing; units financed by the increment did not need to be located within a particular redevelopment project area.

However, in 2011 the State legislature voted to dissolve approximately 400 redevelopment agencies within the State, and on February 1, 2012, the Oakland Redevelopment Agency was eliminated. As such, tax increment financing is no longer applicable, and any low income housing funding benefits identified in the 2002 EIR would no longer be available.

3.13.3.2 Regional Housing Needs Allocation

In May 2008, the Association of Bay Area Governments (ABAG) adopted the Final Regional Housing Needs Allocation (RHNA) for the period of 2007 to 2014, which designates housing objectives for different income levels among the jurisdictions within the nine-county Bay Area.[132] Oakland's allocation is 14,629 units which includes 1,900 units for very low income households, 2,098 units for low income households, 3,142 units for moderate income households, and 7,489 units for above moderate income households.[133]

As required by State law, the City of Oakland Housing Element[134] discusses the City's "fair share allocation" of regional housing by income group as projected and allocated by ABAG. ABAG's determination of the local share of regional housing needs takes into consideration the following factors: market demand for housing; employment opportunities; availability of suitable sites and public facilities; commuting patterns; type and tenure of housing need; loss of units contained in assisted housing that changed to non-low-income use; and special needs housing requirements. The Housing Element of the General Plan was adopted by the City Council on December 21, 2010.

3.13.4 EXISTING CONDITIONS

3.13.4.1 Population

Oakland is the most populous city in Alameda County and had an estimated total population of 420,900 in 2010.[135] This represents an increase of 21,416 residents since 2000. During this time period, the City grew by approximately 5.4 percent. Prior to that, between 1990 and 2000, the City grew from 372,242 to 399,484 persons, or approximately 7.3 percent across the decade.

ABAG projects moderate population growth in the City through 2020 due to significant infill and redevelopment potential. ABAG projects that the City's population will increase from 420,900 in 2010 to 470,900 in 2020, an increase of approximately 12 percent.[136]

The project site currently contains industrial development, and there is no housing or residential population on the project site.

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[132] Association of Bay Area Governments, 2008. *Final Regional Housing Needs Allocation*. Website: www.abag.ca.gov/planning/housingneeds/pdfs/Final_RHNA.pdf. May 15.

[133] Ibid.

[134] Oakland, City of, 2010. *City of Oakland Housing Element, 2007 – 2014, Adopted December 21, 2010.*

[135] Association of Bay Area Governments, 2009. *Projections and Priorities 2009, San Francisco Bay Area Population, Household and Job Forecasts*.

[136] Ibid.

3.13.4.2 Housing

According to the California Department of Finance (DOF), the housing stock in Oakland is characterized by a nearly even mix of multi-family (52 percent) and single-family units (48 percent), and moderate vacancy rates (4.27 percent).[137] There are approximately 79,484 single family homes and 85,162 multi-family homes in the City.[138]

As described above, Oakland's RHNA is 14,629 units which includes 1,900 units for very low income households, 2,098 units for low income households, 3,142 units for moderate income households, and 7,489 units for above moderate income households. [139]

3.13.4.3 Employment

According to ABAG's sub-regional growth study data, in 2000 Oakland had 199,470 jobs, comprising approximately 27 percent of all of the jobs in Alameda County. The total number of jobs in Oakland fell to 188,590 in 2010. By 2020, ABAG projects that the total number of jobs in Oakland will be 229,720 and will be 281,900 in 2035.[140] The 2011 estimated employment at the project site was 702 employees.

3.13.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed;

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element; or

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.

These criteria are discussed below:

a) Would the project induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed?

As with the 2002 Project, the 2012 Project would not include residential development within the OARB sub-area; as such, it would not directly generate population growth through residential development.

[137] California Department of Finance, 2009. *City/County Population and Housing Estimates*. January 1.

[138] Ibid.

[139] Ibid.

[140] ABAG, 2009, op. cit.

New jobs would be associated with the redevelopment, and could induce population growth. As noted in the 2002 EIR, redevelopment was anticipated to generate 14,270 new jobs, with approximately 5,420 new jobs at the OARB sub-area.

Due to a different mix of land uses, the 2012 Project would result in 2,635 jobs in 2020 for the project site (as compared to 5,420 jobs under the 2002 Project). Table 3.13-1 shows the estimated employment by use type. This is fewer jobs than anticipated in the 2002 EIR, and would result in a less-than-significant population growth impact.

Table 3.13-1: Estimated Employment By Land Use Type

Land Use Type	Square Footage/ Acreage[a]	Job Density Multiplier[b]	Total Employees
Warehouse	1,825,650 sq. ft.	0.8	1,461
R&D	175,000 sq. ft.	2.5	438
Recycling Facilities	379,610 sq. ft.	0.8	304
Truck Services	37,680 sq. ft.	0.8	31
Rail	64 ac.	N/A	401
		Total	**2,635**

[a] For purposes of the employment generation included in Table 13.3-1, it is assumed that Variant B is implemented. See Chapter 2, Project Description, for a discussion of Variant B.

[b] Please note that the job density multiplier is per 1,000 square foot gross building space. These numbers were adapted from information used in the 2002 EIR. Recycling facilities and truck services were not included in the 2002 EIR analysis. For these uses, a 0.8 job density multiplier is used. Rail use is anticipated to generate 401 employees.

sq. ft. = square feet

ac. = acres

Source: LSA Associates, Inc., 2012.

The 2012 Project includes several utility and infrastructure improvements. However, these improvements would directly serve the project site, or facilitate the movement of products within the project site, and would not foster development at other sites. As such, the 2012 Project would not indirectly result in substantial population growth.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element?

Similar to the project analyzed in 2002, the 2012 Project does not include demolishing existing residential units within the OARB sub-area. As such, development of the 2012 Project would not displace any existing housing, and there would be no impact related to this significance criterion.

2002 Impact: No Impact

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact (No New Impact)

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element?

As noted in the 2002 EIR, there are no residential units within the OARB sub-area. As such, development of the 2012 Project would not displace any residents, and there would be no impact related to this significance criterion.

2002 Impact: No Impact

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact (No New Impact)

3.13.6 CUMULATIVE IMPACTS

As noted previously, no housing would be demolished or constructed as part of the 2012 Project. The 2012 Project would result in a total of 2,635 jobs at the project site. This would represent approximately 1.1 percent of Oakland jobs anticipated by 2020, and would not be considered a significant cumulative impact.

3.13.7 CONCLUSIONS

Implementation of the 2012 Project would not result in new significant population, housing and employment impacts. Impacts would be similar to those identified in the 2002 EIR, and would continue to be less than significant. No new mitigation measures are required.

3.13.8 REFERENCES

Association of Bay Area Governments, 2008. *Final Regional Housing Needs Allocation*. Website: www.abag.ca.gov/planning/housingneeds/pdfs/Final_RHNA.pdf. May 15.

Association of Bay Area Governments, 2009. *Building Momentum, Projections and Priorities 2009, San Francisco Bay Area Population, Household and Job Forecasts.*

California Department of Finance, 2009. *City/County Population and Housing Estimates*. January 1.

Oakland, City of, 2010. *City of Oakland Housing Element, 2007 – 2014, Adopted December 21, 2010.*

3.14 PUBLIC SERVICES

This section evaluates the potential public services impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant public services impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant public services impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.14.1 PRIOR ANALYSIS AND CONCLUSIONS

3.14.1.1 2002 EIR Impact Findings

The 2002 EIR concluded that the 2002 Project would have potentially significant impacts related to fire protection and emergency response/evacuation routes, which could be reduced to less-than-significant levels:

> **Impact 4.9-1:** Construction activities and increases in employees and residents, as well as increased building density would increase demand for fire and first-responder medical emergency services, resulting in a significant impact for long-term fire and first-responder medical emergency response.
>
> **Impact 4.9-6:** Redevelopment construction could interfere with operation of the Maritime Street emergency response staging area, or with the West Grand Avenue and 7th Street evacuation routes, resulting in a potentially significant impact.

The 2002 EIR concluded that the 2002 Project would have less-than-significant impacts related to the hazardous material (HAZMAT) response, police protection services, school services, library services and hospital:

> **Impact 4.9-1:** Construction activities and increases in employees and residents, as well as increased building density, would increase demand for HAZMAT response, resulting in a less-than-significant impact.
>
> **Impact 4.9-2:** Construction activities and increases in employees and residents, as well as increased building density, would increase demand for police protection services, resulting in a less-than-significant impact.
>
> **Impact 4.9-3:** Increases in residential population could increase school enrollment in the Oakland Unified School District, resulting in a less-than-significant impact. *(Note: This impact is not applicable to the 2012 Project.)*
>
> **Impact 4.9-4:** Increases in residential population could increase demand for library services, resulting in a less-than-significant impact. *(Note: This impact is not applicable to the 2012 Project.)*

Impact 4.9-5: Increases in employee and residential population could increase demand for hospital services, resulting in a less-than-significant impact.

The 2002 EIR also noted that while new or altered physical police facilities are not expected to be required as a result of redevelopment, it is possible that, due to increases in both daytime and full-time populations, as well as increased traffic levels, existing equipment and staffing may not be adequate to serve the redevelopment project area. The 2002 EIR also noted that while new or altered physical school facilities are not expected to be required as a result of redevelopment, it is possible that due to increases in student population, existing equipment and staffing may not be adequate to serve the redevelopment project area. Pursuant to Government Code Section 65595, fees, charges, dedications, or other requirements imposed on development in amounts not to exceed those established by that code section are considered full and complete mitigation for any school-related impacts.

3.14.1.2 2002 EIR Mitigation Measures

For the impact related to long-term fire and first responder medical emergency response, the 2002 EIR identified the following mitigation measure to reduce the impact to a less-than-significant level:

Mitigation Measure 4.9-1: The City and Port shall cooperatively investigate the need for, and, if required, shall fund on a fair-share basis, development and operation of increased firefighting and medical emergency response services via fireboat to serve the OARB sub-district.

For the potential impact related to interfering with the operation of the Maritime Street emergency response staging area, or with the West Grand Avenue and 7th Street evacuation routes, the 2002 EIR identified the following mitigation measures to reduce impacts to a less-than-significant level:

Mitigation Measure 4.9-2: The Port and City shall work with the Office of Emergency Services (OES) to ensure changes in local area circulation are reflected in the revised Response Concept.

Mitigation Measure 4.9-3: The Port and City shall require developers within their respective jurisdiction to notify OES of their plans in advance of construction or remediation activities.

3.14.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard

Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

SCA PSU-1: 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 fire alarm 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 fire water service and fire alarm facilities installed in accordance with standard specifications of the serving utilities.

SCA PSU-2: Fire Safety Phasing Plan
Prior to issuance of a demolition, grading, and/or construction and concurrent with any p-job submittal permit

The project applicant shall submit a separate fire safety phasing plan to the Planning and Zoning Division and Fire Services Division for their review and approval. The fire safety plan shall include all of the fire safety features incorporated into the project and the schedule for implementation of the features. Fire Services Division may require changes to the plan or may reject the plan if it does not adequately address fire hazards associated with the project as a whole or the individual phase.

3.14.3 UPDATED REGULATORY SETTING

The following discussion reviews federal and State regulations and provisions of the Oakland General Plan that are relevant to public services for the 2012 Project.

3.14.3.1 Federal

As identified in the 2002 EIR, the Federal Emergency Management Agency (FEMA), provides direction and assistance to State and local governments, but does not regulate approaches to emergency planning or response.

The Transportation Worker Identification Credential Program (TWIC) was established by Congress through the Maritime Transportation Security Act (MTSA) of 2002 and is administered by the U.S. Department of Homeland Security Transportation Security Administration (TSA) and U.S. Coast Guard. TWICs are tamper-resistant biometric credentials issued to workers who require unescorted access to secure areas of ports, vessels, outer continental shelf facilities and all credentialed merchant mariners. Over one million workers including longshoremen, truckers, port employees and others are required to obtain a TWIC.[141]

3.14.3.2 State

The 2002 EIR acknowledged California Government Code Section 8607(a), which authorizes the establishment of the Standardized Emergency Management System (SEMS). SEMS is intended to

[141] U.S. Department of Homeland Security, 2012. Transportation Security Administration. *Security Program: Transportation Worker Identification Credential Program Information*. Website: www.tsa.gov/what_we_do/layers/twic/program_info.shtm (accessed April 11).

standardize responses to emergencies involving multiple jurisdictions or multiple agencies. Local government must use SEMS in order to be eligible for State funding of response-related personnel costs occurring in response to an emergency incident.

3.14.3.3 Local

According to the 2002 EIR, the Land Use and Transportation Element (LUTE) of the Oakland General Plan did not include specific goals or policies regarding public service systems relevant to the Oakland Army Base redevelopment program. Since adoption of the 2002 EIR, the City General Plan has been updated; the following policies and action items from the Safety Element of the City of Oakland General Plan specifically address public services and are applicable to the 2012 Project.[142]

Policy Statements Related to Emergency and Fire Protection Services

- Policy PS-1: Maintain and enhance the city's capacity to prepare for, mitigate, respond to and recover from disasters and emergencies.
- Policy FI-1: Maintain and enhance the city's capacity for emergency response, fire prevention and fire-fighting.
  - Action FI-1.1: Periodically assess the need for new or relocated fire stations and other facilities, changes in staffing levels, and additional or updated supplies, equipment, technologies and in-service training classes.
  - Action FI-1.2: Strive to meet a goal of responding to fires and other emergencies within seven minutes of notification 90 percent of the time.
- Policy FI-2: Continue, enhance or implement programs that seek to reduce the risk of structural fires.
  - Action FI-2.1: Adopt and amend as needed updated versions of the California building and fire codes so that optimal fire-protection standards are used in construction and renovation projects.
  - Action FI-2.3: Continue to review development proposals to ensure that they incorporate required and appropriate fire-mitigation measures, including adequate provisions for occupant evacuation and access by fire-fighting personnel and equipment.

3.14.4 EXISTING CONDITIONS

3.14.4.1 Fire Protection

The Oakland Fire Department (OFD) provides fire protection (prevention and suppression), and local emergency response (rescue, hazardous materials response, and first responder emergency medical services) services to the project site and vicinity. The Alameda County Medical Services District contracts with American Medical Response Ambulance Company and OFD to respond to medical emergencies.

Facilities and Staffing. The OFD operates 25 fire stations, including one at Oakland International Airport. One station (Station 3) is staffed by highly trained Hazardous Materials (HAZMAT) specialists and technicians.[143] The OFD is organized into four divisions and three

[142] Oakland, City of, 2004. *City of Oakland General Plan, Safety Element, Protect Oakland*. November.

[143] Oakland, City of, 2009. Oakland Fire Department (OFD), *Special Operations*. Website: www.oaklandnet.com/fire/operations/special_operations.asp (accessed January 26, 2012).

battalions that provide requested fire and emergency medical services. The battalions are organized by the following geographic areas: Battalion 2 serves West Oakland and North Oakland; Battalion 3 serves the area from Seminary Boulevard, east to the City of San Leandro; and Battalion 4 serves central Oakland. Beginning in July 2012, OFD stations will be closed for several consecutive days on a rotating basis, in order to respond to a budgetary shortfall citywide.

The OFD maintains 24 engine companies with approximately 4 personnel per engine, 4 truck companies with 4 personnel per truck, and 3 truck companies with 5 personnel per truck. The OFD is a part of the State of California Master Mutual Aid agreement where OFD provides mutual aid to other cities and communities throughout the State.[144]

Fire Station 3, located at 1445 14th Street, approximately 0.5 mile east of the 2012 Project site, would provide primary fire protection, HAZMAT response, and emergency response services to the project area.[145] Station 3 is staffed daily by eight firefighters, two of which are paramedics and the remaining emergency response technicians (EMT). Station 3 has an engine and truck for fire suppression, and as previously described, houses OFD's primary HAZMAT response team.

Fire Station 5, located at 934 34th Street, approximately 2 miles northeast of the 2012 Project site, or Fire Station 1, located at 1605 Martin Luther King Way, approximately 2 miles southeast of the 2012 Project site, would provide secondary response to the project area. Station 5 is staffed daily by four fire fighters (one paramedic and three EMTs) and has one engine, and Station 1 is staffed daily with nine firefighters (two paramedics and seven EMTs) and has one engine and one truck.[146]

Service Demand. The OFD Dispatch Center is located in downtown Oakland and is responsible for fire and medical emergency coordination and response. In 2011, the Dispatch Center received approximately 62,659 calls for response of which 81 percent were medical emergencies.[147] The OFD's response time goal is 7 minutes, 90 percent of the time. Currently, the OFD's average citywide response time is 7 minutes, 86 percent of the time.[148]

Emergency Response and Access. As described in the 2002 EIR, the OFD Office of Emergency Services (OES) is responsible for coordinating responses to a widespread emergency. The OES prepares, maintains, and updates the City's Response Concept, a written plan that describes how OES intends to respond to widespread incidents. The Response Concept, prepared in accordance with State requirements under SEMS, describes the structure and role of the City's emergency management organization. Annex H of the Response Concept includes maps of routes that would serve as the main entry to areas by emergency response personnel, as well as the main exits from areas for evacuees. As described in the 2002 EIR, West Grand Avenue and 7th Street would serve as first responder and

[144] Hoffmann, Mark, 2012. Interim Fire Chief, City of Oakland Fire Department. Personal communications with LSA Associates, Inc. February 8.

[145] The 2002 EIR identified Fire Station 2, located at 100 Jack London Square, immediately east of the project area (at the base of the Franklin Delano Roosevelt pier) as the primary responder to the project site. However, Fire Station 2 closed in August 2003.

[146] Hoffmann, Mark, 2012, op. cit.

[147] Ibid.

[148] Ibid.

evacuation routes to and from both sides of Maritime Street, and Maritime Street would serve as the emergency response staging area. The Response Concept and Annex H are periodically updated to accommodate changes to the area proposed by redevelopment.

3.14.4.2 Police

The Oakland Police Department (OPD) provides police services throughout the City, including the 2012 Project site and vicinity.

Facilities and Staffing. The OPD is headquartered at 455 7th Street in Downtown Oakland, approximately 2.5 miles southeast of the 2012 Project site. The OPD also operates from the Eastmont Substation at 73rd and Bancroft Avenues. The OPD has approximately 660 sworn police officers, approximately 297 support staff, and 10 reserve officers.[149] The OPD has reduced its staffing level from last year by approximately 60 sworn police officers and currently anticipates a monthly reduction of 4 sworn police officers until January 2013. After this date, the OPD plans to hire approximately 35 sworn police officers.[150]

The OPD has divided the City into 3 command areas and 35 community policing beats. The 2012 Project site is located within the Bureau of Field Operations One (BFO1), which is comprised of West and North Oakland and consists of 3 Police Service Areas (PSAs) and 21 beats. Patrol beats have one officer assigned 24 hours per day. The 2012 Project site is located within patrol Beats No. 2Y, 2X, 1X, 5Y, and the lower part of 7X.[151] The OPD also operates three police boats from the Public Safety Dock near Fire Station 2 where several officers and a sergeant maintain the boats and patrol the Oakland Inner and Outer Harbor area, the Port of Oakland, the Bay Bridge, the Ferry terminals (both Oakland in Alameda), the BART under water vent tube, and the airport.[152]

Service Demand. All emergency (911) and non-emergency calls for police services are received through OPD's communications center located at 1701 Edgewater Drive. Calls for fire and medical services are routed to the OFD for dispatching. Priorities for responding to police calls are set by a computer-aided dispatch system that may be overridden by dispatchers. Police officers are dispatched from the police communications center by radio and/or laptop computers mounted in police vehicles.

In 2011, the OPD received approximately 9 emergency calls from the 2012 Project area.[153] City-wide average response times for Priority 1, 2, and 3 calls are 10.4 minutes, 22.8 minutes, and 23.5 minutes,

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[149] Oakland, City of, 2012a. Oakland Police Department (OPD). Personnel Distribution Report. February 17.

[150] Garcia, Gilbert 2012. Deputy Director, Bureau of Services. Oakland Police Department. Personal communications with LSA Associates, Inc. February 21 and March 22.

[151] Oakland, City of, 2012b. Oakland Police Department (OPD). Community Policing. *Neighborhood Crime Prevention Council Map.* Website: www2.oaklandnet.com/oakca/groups/police/documents/image/oak025561.pdf (accessed March 22).

[152] Gordon, James, 2012. Oakland Police Department. Personal communications with LSA Associates, Inc. February 9.

[153] Garcia, Gilbert 2012, op. cit.

respectively.[154] The estimated average response time to the project site is 17 minutes. The OPD has not experienced any difficulties with emergency access to the project vicinity.[155]

Project Site Security. The majority of the 2012 Project site is within the OARB sub-district, and the southern portion of the project site extends into the Maritime sub-district. The 2002 EIR noted that the OPD provided police services to the Maritime and 16th/Wood sub-districts, and contracted private guard services patrolled the OARB sub-district as the first responder while OPD provided addition support. According to the OPD, private security services do not currently patrol the entire project area. According to the Port, private security is only provided at its truck parking facility. The Port pays for City services, including police services, through annual payments to the City. In accordance with a memorandum of understanding between the City and the Port, the Port funds 2 full-time OPD officers to enforce truck-related regulations in West Oakland.[156] Primary law enforcement issues in the project area include property crimes, assaults, drug dealing and prostitution.[157]

3.14.4.3 Schools

The Oakland Unified School District (OUSD) manages and operates elementary, middle, and high schools in the City of Oakland. According to the 2002 EIR, the 2002 Project site is within the boundaries of two OUSD public schools: Prescott Elementary School and McClymonds High School. In 2005, Prescott Elementary School changed to the Preparatory Literary Academy of Cultural Excellence (PLACE) @ Prescott, and served 208 students during the 2010-2011 school year.[158] During the 2010-2011 school year, McClymonds High School served 254 students in grades 9 through 12.[159]

The OUSD charter schools closest to the project site include: Oakland Charter High School (Grades 9-12), located at 345 12th Street, 3 miles east of the project site; KIPP Bridge Charter School (Grades 5-8), located at 991 14th Street, approximately 2 miles east of the project site; Oakland School of the Arts (Grades 6-8), located at 530 18th Street, approximately 3 miles east of the project site; and the American Indian Public Charter School II (Grades 6-8), located at 171 12th Street, approximately 3 miles east of the project site.[160]

As described in the 2002 EIR, the Oakland Military Institute College Preparatory Academy was located in the OARB sub-district. Since May 2007, the Oakland Military Institute College Preparatory Academy (an OUSD charter school) has relocated to 3877 Lusk Street in Northwest Oakland.

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[154] Ibid.

[155] Allison, Darren, 2012. Interim Deputy Chief of Police, Bureau of Field Operations, West. Oakland Police Department. Personal communications with LSA Associates Inc., February 13.

[156] Ibid.

[157] Ibid.

[158] California Department of Education, 2012. Dataquest, Enrollment of California Public Schools by Grade, 2010-2011. Website: dq.cde.ca.gov/Dataquest (accessed January 23).

[159] Oakland Unified School District, 2011. *Executive Summary School Accountability Report Card, 2010-2011 for McClymonds High*. December.

[160] Oakland Unified School District, 2012. Office of Charter Schools. Website: www.ousdcharters.net (accessed April 11).

3.14.4.4 Other Public Facilities

As described in the 2002 EIR, the West Oakland branch library, located at 1801 Adeline Street, is the closest library to the project site, and Summit Medical Center, located at 350 Hawthorne Avenue, is the nearest hospital to the project site.

3.14.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

   i) Fire protection;

   ii) Police protection;

   iii) Schools; or

   iv) Other public facilities.

These criteria are discussed below.

i) Fire protection

The 2012 Project would not result in increased demand for fire protection services beyond that identified in the 2002 EIR and would also not create a need for new OFD facilities.

As noted in the 2002 EIR, redevelopment was anticipated to generate 14,270 new jobs, with approximately 5,420 new jobs at the OARB sub-area. The 2012 Project would result in the development of new primarily warehouse buildings and infrastructure, and would increase employment by approximately 2,635 persons. As a result, the 2012 Project could increase the need for fire protection and emergency response services, but at a reduced level from that anticipated in the 2002 EIR. The 2012 Project would be subject to SCA PSU-1, SCA PSU-2, and 2002 EIR Mitigation Measures 4.9-1, 4.9-2, and 4.9-3. With implementation and compliance with the these SCA and mitigation measures, potential impacts related to increased demand for fire protection and emergency response services would be less than significant.

Mitigation Measure 4.9-1 would require the City and the Port to cooperatively investigate the need for, and if required, fund on a fair-share basis development and operation of increased firefighting and medical emergency response services via fireboat to serve the OARB sub-district. The City and Port would also be allowed to develop fee formulae (to recoup initial investment from future development or tenants), as well as a long-term cost-sharing formula (to equitably distribute the cost of continuing operations). Mitigation Measures 4.9-2 and 4.9-3 would require the Port and City to work with OES to ensure changes in local area circulation are reflected in the 2012 Project's "Response Concept" and to require developers within their respective jurisdiction to notify OES of their plans before construction or remediation activities. Implementation of these mitigation measures would ensure adequate emergency access routes and response staging areas to serve the project site.

The 2012 Project also would be subject to State and local Fire Code requirements, and SCA PSU-1 and SCA PSU-2, which require: 1) the project applicant to install fire water service and fire alarm facilities in accordance with standard specifications; 2) the Fire Services Division to review and approve fire crew and apparatus access, water supply availability and distribution to current codes and standards; and 3) the project applicant to submit a separate fire safety phasing plan that includes all of the fire safety features incorporated into the 2012 Project and the schedule for implementation of the features.

State and local regulatory requirements and these Standard Conditions of Approval required by the City, would reduce the impact of the 2012 Project on OFD to a less-than-significant level, and ensure that no new OFD facilities are required to serve the 2012 Project.

The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to fire protection facilities than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.9-1, 4.9-2, and 4.9-3

2012 Mitigation: 2002 EIR Mitigation Measures 4.9-1, 4.9-2, and 4.9-3, supplemented with SCA PSU-1 and SCA PSU-2, 2012 EIR Mitigation Measures 3.16-15a and 3.16-15b (address emergency response)

Significance After Implementation: Less Than Significant

ii) Police protection

The 2012 Project would not result in increased demand for police services beyond that identified in the 2002 EIR and would not create a need for new OPD facilities.

As noted in the 2002 EIR, redevelopment was anticipated to generate 14,270 new jobs, with approximately 5,420 new jobs at the OARB sub-area. The 2012 Project would result in the development of new primarily warehouse buildings and infrastructure, and would increase employment by approximately 2,635 persons. As a result, the 2012 Project could increase the need for police protection services, but at a reduced level from that anticipated in the 2002 EIR.

The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to police protection facilities than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

iii) Schools

No residential uses are proposed as part of the 2012 Project and as such, the project would not directly impact school population. The 2012 Project would not directly affect the existing school population or increase school enrollment at PLACE @ Prescott and McClymonds High School, such that new school facilities would have to be physically altered or newly constructed. Therefore, the 2012 Project would have no school impacts.

The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to school facilities than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

iv) Other public facilities

No residential uses are proposed as part of the 2012 Project and as such, the project would not directly impact other public facilities such as libraries and community centers. The 2012 Project would not directly affect the existing public facilities such that new facilities would have to be physically altered or newly constructed. Therefore, implementation of the 2012 Project would have no impact on other public facilities.

The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to other public facilities than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: No Impact

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No Impact

3.14.6 CUMULATIVE IMPACTS

The geographic scope for assessing the potential for cumulative public services impacts consists of the service areas of the agencies providing services to the 2012 Project area. The increased employee population and primarily warehouse and infrastructure development resulting from the 2012 Project, in conjunction with population and development of past, present, existing, pending, and reasonably foreseeable future development in the City, would result in a cumulative increase in the demand for fire and police protection services. This cumulative increase could result in the need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives. Because no residential uses are proposed as part of the 2012 Project, the project would not directly impact school and other public facilities (e.g., libraries and community centers) and services. The following discussion evaluates the potential for cumulative impacts.

3.14.6.1 Fire Protection

For fire protection services, the geographic area for assessing cumulative impacts is the City of Oakland. The 2012 Project, in conjunction with other past, present, and reasonably foreseeable future projects, could result in a cumulative increase in demand for fire protection services. The 2012 Project would increase employment at the project site by approximately 2,240 persons. However, as discussed in the above project-specific analysis, demand from the 2012 Project would not result in a significant impact on OFD services or create the need for new or expanded facilities.

The 2012 Project would allow for adequate access of emergency vehicles. West Grand Avenue and 7th Street would continue to serve as first responder/evacuation rotes to the project area. The 2012 Project would be subject to Mitigation Measures 4.9-1, 4.9-2, and 4.9-3 included in the 2002 EIR, Mitigation Measure 3.16-15 in the 2012 Addendum, and SCA PSU-1 and PSU-2. These measures and standards, in addition to State and local regulatory requirements associated with fire protection and prevention would reduce the cumulative contribution of the 2012 Project to fire protection services impacts to a less-than-significant level. Other cumulative projects in the City would also be subject to similar measures. The effect of the 2012 Project on fire protection services, in combination with other past, present, and foreseeable projects, would not be cumulatively considerable.

The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project and would not result in any new or more significant impacts related to fire protection services than were described in the 2002 EIR. Therefore, the 2012 Project would not result in or contribute to any significant cumulative fire protection service impacts.

3.14.6.2 Police

For police services, the geographic area for assessing cumulative impacts is the City of Oakland. The 2012 Project, in conjunction with other past, present, and reasonably foreseeable future projects, could result in a cumulative increase in demand for police services. As previously discussed, demand from the 2012 Project would not result in a significant impact on OPD services or create the need for new or expanded facilities.

The 2012 Project would increase the number of employees at the project site by approximately 2,240. Cumulative development in the City would generally be expected to increase demand for police services, although some new development in the City (e.g., the development of infill parcels in urban areas) could have beneficial effects on police services if it increases informal surveillance of areas prone to criminal activities. In August 2010, OPD released a working draft of its Strategic Plan, which outlines ways in which OPD plans to provide service to the City's residential and employee population, in the context of a high workload and budget constraints. The Strategic Plan identifies several ways to increase the efficiency of OPD through the expansion of partnerships with other law enforcement agencies; the use of more sophisticated intelligence-gathering mechanisms; and upgrading critical Police Department facilities. The Strategic Plan would enable OPD to more effectively serve cumulative development without the immediate need to develop more OPD facilities[161].

Therefore, the 2012 Project would not make a significant contribution to a cumulative increase in demand for police services and would not contribute to any cumulative need for new OPD facilities. The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project and would not result in any new or more significant impacts related to police protection services than were described in the 2002 EIR. Therefore, the 2012 Project would not result in or contribute to any significant cumulative police service impacts.

3.14.6.3 Schools and Other Public Facilities

The 2012 Project would not directly affect the existing school and other public facilities such that new facilities would have to be physically altered or newly constructed. The 2012 Project would not make a significant contribution to a cumulative increase in demand for school and other public services and would not contribute to any cumulative need for new school and other public facilities. The 2012 Project would not result in any new or more significant impacts related to school and other public facilities than were described in the 2002 EIR.

3.14.7 CONCLUSIONS

Redevelopment of the Army Base would not result in significant new public services impacts or a substantial increase in the severity of previously identified public services impacts compared to the 2002 EIR. Therefore, impacts would be similar to those addressed in the 2002 EIR, and would continue to be less than significant. Previously imposed mitigation measures from the 2002 EIR have been identified and, where appropriate, have been clarified, refined, revised, or deleted. Two new mitigation measures, Mitigation Measures 3.16-15a and 3.16-15b relating to emergency response are further discussed in Section 3.16, Transportation/Traffic.

[161] Oakland, City of, 2010. Oakland Police Department (OPD). *Strategic Plan, Working Draft*. August. Website: www2.oaklandnet.com/oakca/groups/police/documents/webcontent/dowd022061.pdf (accessed February 3, 2012).

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Oakland Unified School District, 2011. *Executive Summary School Accountability Report Card, 2010-2011 for McClymonds High*. December.

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3.15 RECREATION

This section evaluates the potential recreation impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant recreation impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant recreation impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.15.1 PRIOR ANALYSIS AND CONCLUSIONS

3.15.1.1 2002 EIR Impact Findings

The 2002 Base Reuse Plan EIR identified 29 acres of "Park, Public Access", which included 19-acres for Gateway Park and approximately 10 acres of public (shoreline) access in the Gateway Development Area.[162] The 2002 EIR concluded that the 2002 Project would have potentially significant impacts that could be reduced to less-than-significant levels due to construction and/or operation of the Gateway Park having an adverse physical effect on the environment:

> **Impact 4.10-2:** Construction and/or operation of the Gateway Park could have an adverse physical effect on the environment. *(Note: This impact is not applicable to the 2012 Project.)*

The 2002 EIR concluded that the 2002 Project would have a less-than-significant impact on Raimondi Park or other nearby parks:

> **Impact 4.10-1:** Raimondi Park or other nearby parks could experience increased use potentially leading to or accelerating their physical deterioration. *(Note: This impact is not applicable to the 2012 Project.)*

Construction activities, recreational uses and potential Bay fill also could affect surface water quality; these potential physical impacts and measures to mitigate them to a less-than-significant level were discussed in Chapters 4.15: Surface Water. In addition, the consistency of this potential fill with policies of the Bay Plan is addressed in Section 4.1: Consistency with Plans and Policies.

3.15.1.2 2002 EIR Mitigation Measures

For the potential impact related to construction and/or operation of the Gateway Park having an adverse physical effect on the environment, the 2002 EIR identified the following mitigation measures to reduce the impact to a less-than-significant level (Also, see Chapter 3.9, Hydrology and Water Quality):

[162] The 19 acres for a Gateway Park to be developed by EBRPD includes 15 acres from the US Army and 4 acres from Caltrans as a mitigation measure for the Bay Bridge East Span Replacement Project. Gateway Park is not part of the 2012 Project.

Mitigation Measure 4.15-1: Prior to in-water construction, the contractor shall prepare a water quality protection plan acceptable to the RWQCB, including site-specific best management practices for protection of Bay waters, and shall implement this plan during construction. *[Note: This mitigation measure is not applicable to the 2012 Project.]*

Mitigation Measure 4.15-2: Contractors and developers shall comply with all permit conditions from the RWQCB, Corps, and BCDC. *[Note: This mitigation measure is not applicable to the 2012 Project.]*

This Gateway Park is not part of 2012 Project area and therefore these mitigation measures do not apply.

3.15.2 STANDARD CONDITIONS OF APPROVAL

There are no Standard Conditions of Approval relating to Recreation that apply to the 2012 Project.

3.15.3 UPDATED REGULATORY SETTING

3.15.3.1 Federal

As discussed in the 2002 EIR, there are no relevant federal laws, regulations, or policies regarding recreation.

3.15.3.2 State

The 2002 EIR identified findings and policies from the San Francisco Bay Plan, and the City of Oakland General Plan relevant to recreation. While the San Francisco Bay Plan recreation policies were amended in September 2006, which post-dates the certification of the 2002 EIR, the general findings and policies identified from the San Francisco Bay Plan are still consistent and no update to the regulatory setting is necessary.

As discussed in the 2002 EIR, the McAteer-Petris Act directs BCDC to exert its land use authority (among other authorities) within its jurisdiction, and BCDC does so in part through preparation and implementation of the *San Francisco Bay Plan* (the "Bay Plan"). The Bay Plan addresses recreation and public access, among other issues. The Bay Plan contains specific findings and policies concerning recreation on and around the Bay (see Section 4.1 of the 2002 EIR: Consistency with Plans and Policies, for discussion of these policies). The Bay Plan recognizes the Bay and its shoreline as a valuable recreational resource, and finds that recreational uses of the Bay and shoreline should be planned as far into the future as possible. Bay Plan policies for recreation focus on active recreational facilities, such as fishing piers and marinas. The Bay Plan states that concentrations of waterfront recreational facilities should generally be located as close to major population centers as feasible, and should not preempt sites needed for ports, waterfront industry, or airports; rather, efforts should be made to integrate recreation into such facilities, to the extent they might be compatible. In addition, the Bay Plan encourages waterfront recreation facilities to the extent they do not have significant adverse effects on water quality and circulation, would not destroy valuable marshes or mudflats, and would not harm identified valuable fish and wildlife resources.

In 2000, BCDC amended the San Francisco Bay Area Seaport Plan and the San Francisco Bay Plan to remove the port priority use and marine terminal designation from approximately 189 acres of the

Army Base and retain 15 acres of land on the Base for port ancillary uses.[163] The Bay Plan specifically includes the following policy and a map that shows the proposed Gateway Park at the western spit of land, west of the Gateway Development Area:

- Gateway Shoreline Park - Develop gateway park at Bay Bridge touchdown with gracious pedestrian and bicycle access to the Bay Bridge. Incorporate viewing, picnicking, non-motorized small boat launching and interpretation of current and historic transportation infrastructure and natural and cultural factors. Protect eelgrass beds and nearby endangered species habitats.

The Bay Plan does not address the 10 acres of public (shoreline) access in the Gateway Development Area provided for in the 2002 Base Reuse Plan.

As part of implementation of the OARB Reuse and Redevelopment Plans, the City of Oakland and the California State Lands Commission (SLC) negotiated and settled issues related to the designation of lands subject to Tidelands Trust in the OARB through the recordation of the Oakland Army Base Title Settlement and Exchange Agreement ("Exchange Agreement") dated August 7, 2006. The SLC has jurisdiction over "tidelands trust" lands, which are certain tidal and submerged lands granted by the state in trust to cities and counties to develop harbors in furtherance of state and national commerce. These grants require that granted lands be used consistent with the public trust and terms of the grant and require the grantee to use the revenues produced from these lands for trust purposes consistent with the grants. Section 6 of the Exchange Agreement requires that there be public access in the form of "permanent vehicular, bicycle and pedestrian access to the Public Trust lands" within the OARB Sub-district Gateway Development Area and to the adjoining proposed Gateway Park; prior to any approval of any proposed circulation plan in the area, a written determination from the Executive Officer of the Commission must be obtained that the plan meets the requirements of the Exchange Agreement. The City is coordinating with the SLC to review the proposed public access plan and obtain the required written determination, which the City believes satisfies the requirement stipulated by the Exchange Agreement.

3.15.3.3 Local

As discussed in the 2002 EIR, the East Bay Regional Park District (EBRPD) manages regional parks for Alameda and Contra Costa counties. While EPRPD's Master Plan (1996) does not identify lands within the study area as under current or planned management of EBRPD, the EBRPD has expressed interest in acquiring through Public Benefit Conveyance approximately 19 acres at the tip of the Gateway peninsula from the Army to manage as a park. Gateway Park is in the early planning stages being led by EBRPD and a consortium of agencies. The 2012 Project boundary does not include Gateway Park.

The *Open Space Conservation and Recreation* Element of the Oakland General Plan inventories existing open space, conservation, and recreation resources of the City; proposes standards; puts forth goals, objectives, and policies; and recommends actions. Themes of the OSCAR include increasing and protecting these resources, and bringing them into neighborhoods where they currently do not exist. Policies relating to the 2012 Project include:

[163] Bay Conservation and Development Commission, 1968. *San Francisco Bay Plan*, as amended through 2001 Resolution No 00-10: Adoption of Bay Plan Amendment No. 4-00, Deletion and Addition of Port Priority Use Area Designation at the Oakland Army Base and Port of Oakland in the Seaport and Bay Plan. April.

- Policy OS-3.2: Military Base Open Space: When the FISC or OARB become available for redevelopment, opportunities to provide recreational facilities should be studied. Improved shoreline access should be pursued, provided that it does not interfere with the development and operation of new maritime and transportation facilities.
- Policy OS-7.2: Dedication of Shoreline Public Access: Support BCDC requirements which mandate that all new shoreline development designate the water's edge as publicly accessible open space where safety and security are not compromised, and where access can be achieved without interfering with waterfront industrial and maritime uses. Where such conflicts or hazards would result, support the provision of off-site access improvements in lieu of on-site improvements.

The 2002 OARB Reuse Plan includes a goal to promote development of a public access shoreline park. In support of this goal, the Reuse Plan also includes a recommendation that the US Army convey the 15-acre spit along the eastern touchdown of the Bay Bridge to EBRPD through a Public Benefit Conveyance. This transfer will occur after environmental remediation of the land is completed. As noted above, the 2012 Project boundary does not include the Gateway Park area. The 2002 Reuse Plan proposed 29 acres of "Park, Public Access" which included 19 acres for Gateway Park and approximately 10 acres of public (shoreline) access in the Gateway Development Area.[164] These areas are generally depicted in Figures 2-5a and 2-5b in Chapter 2, Project Description.

3.15.4 EXISTING CONDITIONS

Locally, a major change in existing conditions relating to recreation was the opening in 2004 of the Port's 40-acre Middle Harbor Shoreline Park at the western end of 7th Street. Other than that, existing conditions relating to recreation have not changed substantially from the regional and local setting identified in the 2002 EIR, including the fact that the 19-acre Gateway Park and the 10 acres of public (shoreline) access in the Gateway Development Area have not been developed. Existing uses at the 2012 Project site include truck parking, cargo container storage, maintenance facilities, rail yards, large warehouses, and vacant land (see Section 3.10, Land Use and Planning, for more detailed information about existing uses). Thus, the analysis in this section of this Initial Study/Addendum analyzes the existing conditions with respect to the open space and public access project uses in Variants A: Working Waterfront and B: R&D/Open Space, which would result in approximately 2.7 acres and 12.2 acres of open space/public access, respectively (see Chapter 2, Project Description, and Figures 2-5a and 205b for more detail).

3.15.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment;

These criteria are discussed below.

[164] The 19 acres for a Gateway Park to be developed by EBRPD includes 15 acres from the US Army and 4 acres from Caltrans as a mitigation measure for the Bay Bridge East Span Replacement Project.

a) Would the 2012 Project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The 2012 Project includes warehouse and distribution, light industrial, research and development, a railyard, and truck parking and servicing uses on the project site at a scale similar to that considered in the 2002 EIR. Redevelopment of the Army Base would not include residential uses and would not result in an increase in a resident population that would use existing parks or recreational facilities. The 2012 Project includes two variants: Variant A: Working Waterfront which would result in approximately 2.7 acres of public access along the Gateway development area shoreline, and; Variant B: R&D/Open Space which would result in approximately 12.2 acres of public access and open space along the Gateway development area shoreline, as shown in Figures 2-5a and 2-5b. This is generally consistent with what was proposed in the same geographic area in the 2002 Project, although Variant A would result in a decrease of 7 acres of shoreline access. As noted above, the waterfront Gateway Park at the Gateway peninsula is not a part of the 2012 Project. In the 2002 impact analysis of the Recreation section, these were listed as a "Benefit."

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

b) Does the 2012 Project include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment?

The 2002 EIR noted that construction of the Gateway Park may require shoreline stabilization that would require Bay fill.

The 2012 Project includes either 2.7 acres (Variant A) or 12.2 acres (Variant B) for public access in the Gateway Development Area. In 2002, the proposed public access considered shoreline stabilization that would require Bay fill. For the 2002 Project, construction activities, recreational uses and potential Bay fill could affect biological resources and surface water quality. The recreation facilities contemplated in the 2012 Project do not include shoreline stabilization. Open space would be provided on an existing wharf.

2002 Impact: Less Than Significant (Construction and/or operation of Gateway Park)

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.15-1 and 4.15-2.

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

3.15.6 CUMULATIVE IMPACTS

Redevelopment of the Army Base would not include residential uses and would not result in an increase in a resident population that would use existing parks or recreational facilities. The 2012 Project includes 2 acres for Variant A and 10-12 acres for Variant B for open space and public access, which would be a benefit. Implementation of the 2012 Project would not result in any significant impacts to recreation; nor would the 2012 Project contribute to any cumulative recreation impact in the region.

3.15.7 CONCLUSIONS

Redevelopment of the Army Base would not result in significant new recreation impacts or a substantial increase in the severity of previously identified recreation impacts compared to the 2002 EIR. Thus, impacts would be similar to those addressed in the 2002 EIR, and would continue to be less than significant. Previously imposed mitigation measures from the 2002 EIR have been identified and, where appropriate, have been clarified, refined, revised, or deleted. No new mitigation measures are required.

3.15.8 REFERENCES

Bay Conservation and Development Commission, 1968. *San Francisco Bay Plan*, as amended through 2001 Resolution No 00-10: Adoption of Bay Plan Amendment No. 4-00, Deletion and Addition of Port Priority Use Area Designation at the Oakland Army Base and Port of Oakland in the Seaport and Bay Plan. April.

3.16 TRANSPORTATION/TRAFFIC

This section evaluates the potential transportation impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant transportation impacts not identified in the 2002 EIR or a substantial increase in severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant transportation impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.16.1 PRIOR ANALYSIS AND CONCLUSIONS

3.16.1.1 2002 EIR Impact Findings

The 2002 EIR concluded that the 2002 Project would have residual significant and unavoidable impact related to roadway segment operations on the Metropolitan Transportation System (MTS):

> **Impact 4.3-2:** Redevelopment would cause some roadway segments on the MTS to operate at LOS F and increase the volume-to-capacity (V/C) ratio by more than three percent on segments that would operate at LOS F without redevelopment.

The 2002 EIR concluded that significant impacts related to intersection level of service, which could be reduced to less-than-significant levels:

> **Impact 4.3-1:** Redevelopment could cause the level of service to degrade to worse than LOS D at three intersections located outside the Downtown area:
>
> - West Grand Avenue/Maritime Street (#1)
> - West Grand Avenue/I-880 Frontage Road (#2)
> - 7th Street/Maritime Street (#10) *(Note: This impact would not occur for the 2012 Project.)*

The 2002 EIR concluded that potentially significant impacts related to traffic hazard, emergency access, policies, plans and programs supporting alternative transportation, parking supply, wait time at BART station fare gates, and activities during construction phase, which could 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 4.3-4**: Due to site constraints, it may not be possible to provide two emergency access routes to the western portion of the Gateway development area, which would be in excess of 1,000 feet from the nearest major arterial.
>
> **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 of Oakland.

Impact 4.3-9: Redevelopment would increase the peak hour average ridership at the West Oakland BART station by three percent where average waiting time at fare gates could exceed one minute. (*Note: This impact is not applicable because 1) average ridership on BART is no longer a CEQA threshold; 2) the Project area is not directly served by BART; and 3) the 2012 Project would generate much lower number of employment than the 2002 Project.)*

Impact 4.3-11: Remediation, demolition/deconstruction, and construction activities within the redevelopment project area would utilize a significant number of trucks and could cause significant circulation impacts on the street system.

The 2002 EIR concluded that the 2002 Project would have a less-than-significant impact related to AC Transit ridership, standing capacity of BART trains, and construction delay:

Impact 4.3-7: Redevelopment would increase the average ridership on AC Transit lines by more than three percent on transit lines serving the redevelopment project area, but the average load factor with the project in place would not exceed 125 percent over a peak 30-minute period. Therefore, the project impact is considered less than significant. (*Note: This impact is not applicable because 1) average ridership on AC Transit is no longer a CEQA threshold; 2) the Project area is not directly served by AC Transit; and 3) the 2012 Project would generate much lower number of employment than the 2002 Project.)*

Impact 4.3-8: Redevelopment would increase passenger volume exceeding the standing capacity of BART trains, but would not increase peak hour average ridership by three percent. Therefore, the project impact is considered less than significant. (*Note: This impact is not applicable because 1) standing capacity on BART is no longer a CEQA threshold; 2) the Project area is not directly served by BART; and 3) the 2012 Project would generate much lower number of employment than the 2002 Project.)*

Impact 4.3-10: Construction of New Berth 21 could cause minor delays to commercial vessels plying their trade. However, the delays would not be frequent and would be within normally accepted practices for a busy port complex. Therefore, the project impact is considered less than significant. (*Note: This impact is not applicable because it is located outside the Project area.)*

Cumulative Transportation Impacts

The 2002 EIR concluded that the 2002 Project would have residual cumulative significant and unavoidable impact related to intersection level of service and the MTS network:

Impact 5.3-1: Increased congestion at intersections exceeding the cumulatively significant threshold. Redevelopment, in combination with past, other current and probable future projects as described in the description of methodology, above, would cause the level of service to degrade to worse than D at the West Grand Avenue/Maritime Street intersection.

Impact 5.3-2: Increased congestion on the MTS exceeding the cumulatively significant threshold. Redevelopment, in combination with past, other current, and probable future projects, 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. Significant cumulative impacts would occur on the following freeway segments:

- I-80 from the Bay Bridge to east of I-80/I-580 split *(Note: This impact would not occur for the 2012 Project.)*
- I-880 from I-980 to the segment south of I-238
- I-580 from west of I-980/SR-24 to I-238 *(Note: This impact would not occur for the 2012 Project.)*
- SR-24 east of I-580 *(Note: This impact would not occur for the 2012 Project.)*

Impact 5.3-5: Inadequate truck-related parking. Redevelopment, in combination with past, other current, and probable future projects, including the Vision 2000 Program could result in inadequate parking supply for trucks serving the Port of Oakland.

The 2006 Draft Supplemental Environmental Impact Report for The Oakland Army Base Auto Mall Project (Lamphier-Gregory) concluded that the Army Base Auto Mall Project would have residual cumulative significant and unavoidable impact related to the intersection level of service at the West Grand Avenue/I-880 Frontage Road intersection. Likewise, the December 2010 Housing Element EIR, the 2004 Wood Street (Central Station) EIR and the 2003 Uptown EIR have all identified this intersection as significant and unavoidable.

Impact Traf-7: At the West Grand Avenue/I-880 Frontage Road intersection, both the Project and Option B would increase traffic in 2025 and both development options would cause the average vehicle delay to increase by more than two (2) seconds where the future baseline level of service would be LOS F during the AM peak, PM peak, and Saturday peak hours. The costs of the mitigation measures described in the 2002 EIR were so prohibitively high that the mitigation measures were not considered feasible and the impacts were considered significant and unavoidable.

The 2002 EIR concluded that significant cumulative impacts related to intersection level of service, traffic hazard, and emergency access, which could be reduced to less-than-significant levels:

Impact 5.3-1: Increased congestion at intersections exceeding the cumulatively significant thresholds:

- West Grand Avenue/I-880 Frontage Road (#2)
- 7th Street/Maritime Street (#10) *(Note: This impact would not occur for the 2012 Project.)*
- 7th Street/I-880 Northbound Ramps (#12)
- 3rd Street/Adeline Street (#25) *(Note: This impact would not occur for the 2012 Project.)*
- 3rd Street/Market Street (#26) *(Note: This impact would not occur for the 2012 Project.)*

- 12th Street/Brush Street (#28)
- Powell Street/I-80 Northbound Ramps (#35) *(Note: This impact would not occur for the 2012 Project.)*

Impact 5.3-3: Increased traffic hazards. Redevelopment, in combination with past, other current, and probable future projects, could result in traffic hazards to motor vehicles, bicycles, or pedestrians due to inadequate design features, incompatible transportation modes, or increase in transport trucks on neighborhood streets.

Impact 5.3-4: Inadequate emergency access. Construction of the access roadway from Maritime Street through the center of the Gateway development area to the Gateway peninsula could result in less than two emergency access routes for this street which would exceed 1000 feet in length.

The 2002 EIR concluded that potentially significant cumulative impacts related to BART standing capacity and BART fare gate wait time, which could be reduced to less-than-significant levels:

Impact 5.3-7: Increased ridership on BART trains. Redevelopment, in combination with past, other current, and probable future projects, including projects of the West Oakland Cumulative Growth Scenario Update, could increase peak hour average ridership by three percent where the passenger volume would exceed the standing capacity of BART trains. (*Note: This impact is not applicable because 1) average ridership on BART is no longer a CEQA threshold; 2) the Project area is not directly served by BART; and 3) the 2012 Project would generate much lower number of employment than the 2002 Project.)*

Impact 5.3-8: Increased waiting time during peak weekday hours at BART fare gates. Redevelopment, in combination with past, other current, and probable future projects, including projects of the West Oakland Cumulative Growth Scenario Update, would increase the peak hour average ridership at the West Oakland BART station by three percent where average waiting time at fare gates could exceed one minute. (*Note: This impact is not applicable because 1) BART fare gate waiting time is no longer a CEQA threshold; 2) the Project area is not directly served by BART; and 3) the 2012 Project would generate much lower number of employment than the 2002 Project.)*

The 2002 EIR concluded that the 2002 Project would have a less-than-significant cumulative impact related to AC Transit ridership, and increased vessel delay:

Impact 5.3-6: Increased ridership on AC Transit during peak weekday hours. Redevelopment, in combination with past, other current, and probable future projects, including the West Oakland Cumulative Growth Scenario Update, would increase the average ridership on AC Transit lines by more than three percent on transit lines serving the redevelopment project area, but the average load factor with the project in place would not exceed 125 percent over a peak 30-minute period. Therefore, the project impact is considered less than significant. (*Note: This impact is not applicable because 1) average ridership on AC Transit is no longer a CEQA threshold; 2) the Project area is not directly served by AC Transit; and 3) the 2012 Project would generate much lower number of employment than the 2002 Project.)*

Impact 5.3-9: Increased delays to commercial vessels. Increased vessel calls due to the redevelopment, in combination with past, other current, and probable future projects, including the Vision 2000 Program, could increase minor delays to commercial vessels plying their trade.

3.16.1.2 2002 EIR Mitigation Measures

For the residual significant and unavoidable impact related to roadway segment operations on the MTS, the 2002 EIR identified the following mitigation measure, which would reduce traffic demand on the MTS but the impact would remain significant:

> **Mitigation 4.3-4:** The City and Port shall jointly create and maintain a transit access plan(s) for the redevelopment project area designed to reduce demand for single-occupant, peak hour trips, and to increase access to transit opportunities. Major project area developers shall fund on a fair share basis the plan(s). *(Note: This mitigation measure has been superseded by SCA TRANS-1 for the 2012 Project.)*

For the significant impacts related to intersection level of service, the 2002 EIR identified the following mitigation measures to reduce the impacts to less-than-significant levels:

> **Mitigation 4.3-1*: West Grand Avenue/Maritime Street (#1).*** As part of the design for the realignment of Maritime Street, the Port shall also provide modifications to the West Grand Avenue/Maritime Street intersection. *(Note: This mitigation measure has been updated for the 2012 Project.)*
>
> **Mitigation 4.3-2: *West Grand Avenue/I-880 Frontage Road (#2).*** Project area developers shall fund, on a fair-share basis, modifications to the West Grand Avenue/I-880 Frontage Road intersection. *(Note: This mitigation measure has been updated for the 2012 Project.)*
>
> **Mitigation 4.3-3: *7th/Maritime Street (#10).*** As part of the design for the realignment of Maritime Street, the Port shall also provide modifications to the 7th/Maritime Street intersection. *(Note: This mitigation measure has been updated for the 2012 Project.)*

For the potentially significant impacts related to traffic hazard, the 2002 EIR identified the following mitigation measures to reduce the impacts to less-than-significant levels:

> **Mitigation 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 4.3-6:** The Port shall fund signage designating through transport truck prohibitions through the interior of the Gateway development area. *(Note: This mitigation measure is no longer applicable because port support services and compatible uses would be provided adjacent to the rail and marine terminals.)*
>
> **Mitigation 4.3-7:** The City and the Port shall continue to work together and shall create a truck management plan 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.

For the potentially significant impacts related to emergency access, the 2002 EIR identified the following mitigation measures to reduce the impacts to less-than-significant levels:

> **Mitigation 4.3-8:** Construct an emergency vehicle access to the western portion of the Gateway development area or provide an emergency service program and emergency evacuation plan using waterborne vessels.

For the potentially significant impacts related to policies, plans and programs supporting alternative transportation, the 2002 EIR identified the following mitigation measures to reduce the impacts to less-than-significant levels:

> **Mitigation 4.3-9:** Redevelopment plans shall conform to City of Oakland or Port development standards with facilities that support transportation alternatives to the single-occupant automobile.
>
> **Mitigation:** Measure 4.3-4, described above.

For the potentially significant impacts related to parking supply, wait time at BART station fare gates, and activities during construction phase, the 2002 EIR identified the following mitigation measures to reduce the impacts to less-than-significant levels:

> **Mitigation 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 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.

For the potentially significant impacts related to waiting time at BART station fare gates, the 2002 EIR identified the following mitigation measures to reduce the impacts to less-than-significant levels:

> **Mitigation 4.3-12:** The City and Port shall provide detailed information regarding redevelopment to BART to enable BART to conduct a comprehensive fare gate capacity assessment at the West Oakland BART station. Pending the results of this assessment, the City and the Port may need to participate in funding the cost of adding one or more fare gates at the West Oakland BART station. (*Note: This impact is not applicable because 1) BART fare gate waiting time is no longer a CEQA threshold; 2) the Project area is not directly served by BART; and 3) the 2012 Project would generate much lower number of employment than the 2002 Project.)*

For the potentially significant impacts related to activities during construction phase, the 2002 EIR identified the following mitigation measures to reduce the impacts to less-than-significant levels:

> **Mitigation 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 hours 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. *(Note: This mitigation measure has been superseded by SCA TRANS-2 for the 2012 Project.)*

Cumulative Transportation Mitigation Measures

For the residual cumulative significant and unavoidable impact related to inadequate truck parking, the 2002 EIR identified the following mitigation measures but the impact would remain significant:

Mitigation 5.3-7: The City and Port shall cooperatively develop a program that combines multiple strategic objectives and implementation tools designed to reduce cumulative truck parking and other AMS impacts. *(Note: This mitigation measure is no longer applicable because port support services and compatible uses would be provided adjacent to the rail and marine terminals and 40.8 acres of truck parking is included as a part of the Project.)*

For the significant cumulative impacts related to intersection level of service, the 2002 EIR identified the following mitigation measures to reduce the impacts to less-than-significant levels:

Mitigation 5.3-1: **7th/Maritime Street.** Project area developers shall fund a fair share of additional modifications at the 7th /Maritime Street intersection. *(Note: This mitigation measure is no longer needed; other measure was identified.)*

Mitigation 5.3-2: 7th Street/I-880 Northbound Ramps. Project area developers shall fund a fair share of modifications at the 7th Street/I-880 Northbound ramp. *(Note: This mitigation measure is no longer needed; other measure was identified.)*

Mitigation 5.3-3: 3rd/Adeline Street. Project area developers shall fund a fair share of the modifications at the 3rd/Adeline Street intersection. *(Note: This mitigation measure is no longer needed.)*

Mitigation 5.3-4: 3rd/Market Street. Project area developers shall fund a fair share of modifications at the 3rd/Market Street intersection. *(Note: This mitigation measure is no longer needed.)*

Mitigation 5.3-5: 12th/Brush Street. Project area developers shall fund a fair share of modifications to the 12th/Brush Street intersection to increase the signal cycle length to 16 seconds. Implementation of this mitigation measure would reduce cumulative impacts at the 12th /Brush Street intersection to a less-than-significant level. *(Note: This mitigation measure is no longer needed; other measure is identified.)*

Mitigation 5.3-6: Powell Street/I-80 Northbound Ramps. Project area developers shall fund a fair share of modifications at the Powell Street/I-80 northbound ramps intersection. *(Note: This mitigation measure is no longer needed.)*

For the significant cumulative impacts related to traffic hazard and emergency access, the 2002 EIR stated the mitigation measures identified for related project impacts in Chapter 4.3 Transportation

(Mitigation Measures 4.3-5 -6, -7, and -8) would reduce the impacts to less-than-significant levels. No additional mitigation is warranted.

For the potentially significant cumulative impacts related to BART standing capacity, the 2002 EIR identified the following mitigation measures to reduce the impacts to less-than-significant levels:

> **Mitigation 5.3-8:** The City and Port shall work with BART to ensure adequate BART train capacity will be available for riders to and from the redevelopment project area, and possibly fund, on a fair share basis, BART train capacity improvements. *(Note: This mitigation measure is not applicable because 1) average ridership on BART is no longer a CEQA threshold; 2) the Project area is not directly served by BART; and 3) the 2012 Project would generate much lower number of employment than the 2002 Project.)*

For the potentially significant cumulative impacts related to BART fare gates, the 2002 EIR stated that Mitigation Measure 4.3-12 identified for related project impact in Chapter 4.3 Transportation would reduce the impacts to less-than-significant levels. No addition mitigation is warranted.

3.16.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

SCA TRANS-1: Parking and Transportation Demand Management
For construction: Prior to issuance of first permit related to construction (e.g., demolition, grading, etc.)
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:

1. 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.
2. Ensure that expected increases in traffic resulting from growth in employment and housing opportunities in the City of Oakland will be adequately mitigated.
3. Reduce drive-alone commute trips during peak traffic periods by using a combination of services, incentives, and facilities.
4. 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.

5. Establish an ongoing monitoring and enforcement program to ensure that the desired alternative mode use percentages are achieved.

The project sponsor shall implement the approved TDM plan. The TDM plan shall include strategies to increase pedestrian, bicycle, transit, and carpool/vanpool use. All four modes of travel shall be considered, and parking management and parking reduction strategies should be included.

Actions to consider include the following:

a) 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.

b Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, onsite signage and bike lane striping.

c) 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.

d) Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.

e) Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.

f) Direct onsite sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency).

g) 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.

h) 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.

i) Guaranteed ride home program for employees, either through 511.org or through separate program.

j) Pre-tax commuter benefits (commuter checks) for employees.

k) 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.

l) On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.

m) Distribution of information concerning alternative transportation options.

n) 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.

o) Parking management strategies; including attendant/valet parking and shared parking spaces.

p) Requiring tenants to provide opportunities and the ability to work off-site.

q) 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.

r) 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, or 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.

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 of Oakland 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 Services 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 onsite 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 and Adeline/3rd Street and Adeline Street intersection, which is discussed under construction impacts of this section.

SCA TRANS-3: Railroad Crossings
Action required prior to railroad crossing construction

Any proposed new or relocated railroad crossing improvements must be coordinated with California Public Utility Commission (CPUC) and affected railroads and all necessary permits/approvals obtained, including a GO 88-B Request (Authorization to Alter Highway Rail Crossings), if applicable. Appropriate safety-related design features and measures should be incorporated, including without limitation:

a) Installation of grade separations at crossings, i.e., physically separating roads and railroad tracks by constructing overpasses or underpasses.
b) Improvements to warning devices at existing highway rail crossings that are impacted by project traffic.
c) Installation of additional warning signage.
d) Improvements to traffic signaling at intersections adjacent to crossings, e.g., signal preemption.
e) Installation of median separation to prevent vehicles from driving around railroad crossing gates.
f) Where soundwalls, landscaping, buildings, etc. would be installed near crossings, maintaining the visibility of warning devices and approaching trains.
g) Prohibition of parking within 100 feet of the crossings to improve the visibility of warning devices and approaching trains.
h) Construction of pull-out lanes for buses and vehicles transporting hazardous materials.
i) Installation of vandal-resistant fencing or walls to limit the access of pedestrians onto the railroad right-of-way.
j) Elimination of driveways near crossings.
k) Increased enforcement of traffic laws at crossings.
l) Rail safety awareness programs to educate the public about the hazards of highway-rail grade crossings.

3.16.3 UPDATED REGULATORY SETTING

Since the adoption of the 2002 EIR, the City of Oakland has updated the Land Use and Transportation Element of the City's General Plan. Changes to the Regulatory Setting since the adoption of the 2002 EIR are described in this section.

3.16.3.1 Federal

Since the approval of the 2002 EIR, a new transportation bill to provide the Federal Highway Administration (FHWA) funding was passed to replace Transportation Equity Act of the 21st Century (TEA-21). The Safe, Accountable, Flexible, Efficient Transportation Equity Act, A Legacy for Users (SAFETEA-LU) authorized transportation spending through September 2009. Since then, transportation funding has been authorized through a series of SAFETEA-LU extensions with the latest set to expire on June 30, 2012. A new transportation bill is being considered by Congress.

3.16.3.2 State/Regional

The Metropolitan Transportation System (MTS) was updated in 2005 to include rural major collector streets and higher based on the Federal Functional Classification System.

The Alameda County Transportation Commission (Alameda CTC) was formed in 2010 from a merger of the Alameda County Congestion Management Agency (ACCMA) and the Alameda County Transportation Improvement Authority (ACTIA). Alameda CTC is responsible for planning, funding and implementing a broad array of transportation projects and programs in Alameda County and for preparation of the Alameda Countywide Transportation Plan (CWTP). It assumes the responsibility of ACCMA in ensuring local government conformance with the Congestion Management Program (CMP) and in reviewing EIRs for proposed development actions. The Alameda CTC has recently updated its Countywide Transportation Demand model, which uses Association of Bay Area Governments (ABAG) Projections 2009 land use projections.

3.16.3.3 Local

The City adopted the Pedestrian Master Plan in 2002 and the Bicycle Master Plan in 2007. These two documents are considered to be parts of the Land Use and Transportation Element of the General Plan. The Pedestrian Master Plan includes polices, design standards and implementation plan to create a pedestrian friendly environment within the city; while the Bicycle Master Plan includes policies and implementation measures to create safe bicycling opportunities (also see discussion in Section 3.16.4.3 below and in Land Use chapter).

3.16.4 EXISTING CONDITIONS/UPDATE TO REGIONAL AND LOCAL SETTING

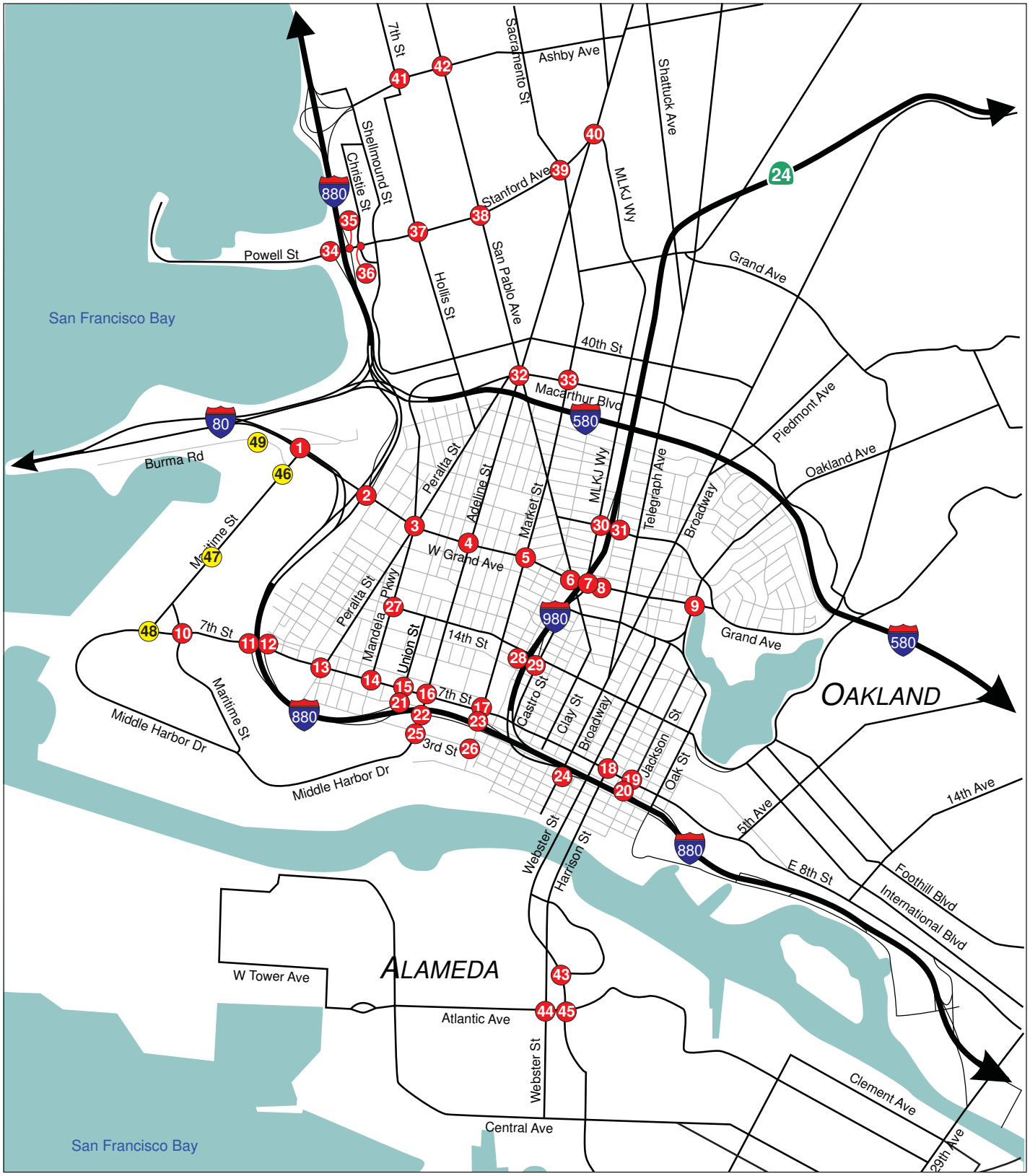
Changes to the Regional and Local Setting since the certification of the 2002 EIR are described in this section.

3.16.4.1 Local Roadway System

Since the development of the 2002 EIR, roadways in the project vicinity have been modified. Specifically, 7th Street loops southeastward at the Middle Harbor Shoreline Park to continue as a new extension of Middle Harbor Road and connect to the existing Middle Harbor Road soon after it turns northward towards Maritime Street. The existing Middle Harbor Road segment between this new connection and 7th Street was renamed as Maritime Street. This new roadway provides access to the Shoreline Park and Berth 55 to Berth 59. Furthermore, West Grand Avenue has been modified from three travel lanes per direction to two travel lanes per direction with the addition of a bicycle lane.

3.16.4.2 Level of Service Analysis

The morning (AM) and afternoon (PM) peak hour operations at all 45 intersections included in the 2002 EIR were assessed for this analysis. In addition, four intersections that would be created as a part of the Project were also evaluated. The study intersections are graphically depicted in Figure 3.16-1. The 3rd Street/Adeline Street intersection, which was evaluated as an all-way stop controlled intersection, currently functions as a fully signalized intersection; while the 3rd Street/Market Street intersection remains a stop-controlled intersection with stop sign facing Market Street traffic. Eighteen freeway mainline segments on the Metropolitan Transportation System (MTS) and the Congestion Management Program (CMP) networks were selected for analysis.



LSA

FIGURE 3.16-1

N

NOT TO SCALE

X Study Intersection

SOURCES: KITTELSON & ASSOCIATES, INC./DOWLING, 2012

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2012 Oakland Army Base Project

Study Intersections

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3.16.4.3 Traffic Conditions, Setting

Existing AM and PM peak hour traffic turning movement counts, dated between 1998 and 2001, were compiled from the 2002 EIR. New turning movement counts were collected in August 2011 at selected intersections, where significant impacts were identified in the 2002 EIR. A detailed comparison of the 2002 EIR and the 2011 count data was conducted. The comparison results indicated that the traffic volumes from the 2002 EIR data set were in general higher than the 2011 volumes. Therefore, the use of the 2002 EIR data set for locations where 2011 data were not collected would yield conservative results. The detailed traffic volume comparison is provided in Appendix B-1. The existing intersection geometry and traffic volumes at the study intersections are provided in Appendix B-2. The existing peak hour level of service at the study area intersections are presented in Table 3.16-1.

AM and PM peak hour traffic volumes used to assess the Project's impact on freeways were the higher of the traffic volumes taken directly from the 2002 EIR or from the most recent data reported by Caltrans (2010 Traffic Volumes on the California State Highway System). The existing peak hour volumes and level of service at the study segments are presented in Table 3.16-2.

Bicycle and Pedestrian Facilities. In 2007, the City of Oakland adopted a Bicycle Master Plan as a part of the Land Use & Transportation Element of the Oakland General Plan. The Plan set forth an implementation program to improve bicycle connectivity and facilities in Oakland. Since its adoption, the City has installed 18.5 miles of new bikeways (through 2011) and has upgraded another 18.7 miles of facilities. In the project vicinity, bike lanes (Class 2) are provided on Mandela Parkway, Market Street, 3rd Street, 8th Street, and the portion of 14th Street west of Mandela Parkway. A bike path (Class 1) was installed on 7th Street east of Wood Street. Additional facilities are proposed in West Oakland and other parts of the city.

Public Transit. The 2012 Project is served by the West Oakland BART station, located approximately one mile east of the project area. AC Transit has modified the bus routes serving the West Oakland area since the development of the 2002 EIR. Currently, West Oakland is served by five bus routes; however, none of these remaining routes, described below, directly serve the project area due to low ridership in the former service:

- Route 26 operates between Emeryville and the Lakeshore area of Oakland via West Oakland (7th Street, Wood Street and 14th Street) every 20 minutes during weekday peak and midday periods and every 30 minutes on weekends and after 7:00 PM on weekdays.
- Route 31 operates between Alameda City Hall and MacArthur BART Station via 7th Street and Peralta Street in West Oakland with 30-minute frequency on both weekdays and weekends.
- Route 314 is a limited service that runs between West Oakland Post Office and Walmart Super Center in the Coliseum area. It operates only on Tuesdays and Thursdays with a single service per day in each direction.
- Route 800 is an all-night service that operates between Richmond BART/Amtrak Station and San Francisco via Albany, Berkeley and Oakland (7th Street in West Oakland).
- Route NL is a Transbay service that runs between Eastmont Transit Center and San Francisco via West Grand Avenue in 30-minute intervals on both weekdays and weekends.

Table 3.16-1: Intersection Level of Service - Existing Conditions

	Intersection	Control	AM Peak Hour		PM Peak Hour	
			LOS	Delay[b]	LOS	Delay[b]
1	W. Grand Avenue & Maritime Street	Signal	B	16.4	B	18.0
2	W. Grand Avenue & I-880 Frontage Road	Signal	C	21.9	C	23.2
3	W. Grand Avenue & Mandela Parkway[b]	Signal	A	5.4	A	6.4
4	W. Grand Avenue & Adeline Street	Signal	D	43.6	F	225.1
5	W. Grand Avenue & Market Street	Signal	B	18.1	C	23.0
6	W. Grand Avenue & San Pablo Avenue	Signal	B	17.3	B	18.5
7	W. Grand Avenue & MLK Jr. Way[c]	Signal	B	13.2	B	14.0
8	W. Grand Avenue & Northgate Avenue [c]	Signal	C	23.1	B	18.7
9	W. Grand Avenue & Harrison Street[c]	Signal	D	37.0	C	31.6
10	7th Street & Maritime Street	Signal	C	25.0	D	36.4
11	7th Street & I-880 SB On-Ramp	Signal	A	2.0	A	3.3
12	7th Street & I-880 NB Off-Ramp	Signal	C	21.2	C	20.7
13	7th Street & Peralta Street	Signal	A	9.2	B	10.2
14	7th Street & Mandela Parkway	Signal	C	25.0	C	23.5
15	7th Street & Union Street	Signal	B	17.8	B	17.6
16	7th Street & Adeline Street	Signal	B	10.7	A	9.7
17	7th Street & Market Street	Signal	B	18.1	B	14.9
18	7th Street & Harrison Street[c]	Signal	C	26.6	F	96.6
19	7th Street & Jackson Street[c]	Signal	B	11.2	A	8.3
20	6th Street & Jackson Street[c]	Signal	B	18.8	E	70.0
21	5th Street & Union/ I-880 N. Ramps	Signal	D	50.3	D	41.5
22	5th Street & Adeline Street	Signal	C	25.9	C	23.7
23	I-880 Off-Ramp & Market Street	Signal	B	14.6	B	17.9
24	5th Street & Broadway[c]	AWSC	C	32.2	E	74.8
25	3rd Street & Adeline Street	TWSC	B	11.2	B	13.1
26	3rd Street & Market Street	Signal	A	4.8	A	4.6
27	14th Street & Mandela Parkway[b]	Signal	B	12.0	B	11.8
28	12th Street & Brush Street[c]	Signal	D	42.9	B	19.2
29	12th Street & Castro Street[c]	Signal	C	26.6	F	89.6
30	27th Street & SR24/580 SB Off-Ramp	Signal	B	12.9	B	13.7
31	27th Street & SR24/580 NB On-Ramp	Signal	B	19.1	C	34.9
32	Adeline Street & San Pablo Avenue	Signal	B	13.2	B	15.7
33	MacArthur Blvd. & Market Street	Signal	B	17.5	C	21.9
34	Powell Street & I-80 Frontage Road	Signal	B	15.6	C	24.5
35	Powell Street & I-80 NB Ramps	Signal	B	14.6	B	18.0
36	Powell Street & Christie Avenue	Signal	C	27.0	D	45.8
37	Powell Street & Hollis Street	Signal	C	21.7	D	38.3
38	Powell Street/Stanford & San Pablo Avenue	Signal	D	35.1	D	37.4
39	Stanford Avenue & Market Street	Signal	C	23.5	C	28.5
40	Stanford Avenue & MLK Jr. Way	Signal	C	32.8	F	82.3
41	7th Street & Ashby Avenue	Signal	C	33.2	D	38.3
42	San Pablo Avenue & Ashby Avenue	Signal	C	29.6	D	52.9
43	Marina Village & Constitution Wy.	Signal	B	13.8	B	14.3
44	Atlantic Avenue & Webster Street	Signal	C	32.9	C	26.4
45	Atlantic Avenue & Constitution Wy.	Signal	B	13.8	B	12.9

[a] Delay in seconds per vehicle
[b] Weighted average of two intersections operating with one controller.
[c] Defined as a downtown intersection

Source Kittelson & Associates 2012

Table 3.16-2: Freeway Segment Level of Service - Existing Conditions

	Existing			
	AM Peak Hour		PM Peak Hour	
Freeway Segment	**LOS**	**V/C**	**LOS**	**V/C**
I-80 at the Bay Bridge				
Eastbound	C	0.533	E	0.973
Westbound	E	0.938	C	0.691
I-80 between I-880 and I-580				
Eastbound	B	0.360	C	0.660
Westbound	C	0.663	C	0.489
I-80 East of I-80/I-580 Split				
Eastbound	B	0.559	E	0.993
Westbound	F	1.004	D	0.725
I-880 Connector to I-80 East				
Northbound	C	0.702	D	0.746
Southbound	C	0.580	B	0.505
I-880 Connector to I-80 West				
Northbound	B	0.382	B	0.437
Southbound	A	0.260	B	0.412
I-880 North of 7th Street				
Northbound	B	0.452	C	0.613
Southbound	B	0.407	C	0.651
I-880 South of 7th Street				
Northbound	D	0.791	D	0.711
Southbound	B	0.459	D	0.806
I-880 North of I-980				
Northbound	D	0.822	C	0.638
Southbound	B	0.365	C	0.730
I-880 South of I-980				
Northbound	E	0.969	E	0.910
Southbound	C	0.604	D	0.806
I-880 North of I-238				
Northbound	D	0.836	E	0.934
Southbound	E	0.968	D	0.885
I-880 South of I-238				
Northbound	D	0.814	E	0.931
Southbound	F	1.032	E	0.922
I-238				
Eastbound	B	0.459	D	0.732
Westbound	C	0.698	B	0.318
I-580 East of I-238				
Eastbound	B	0.462	D	0.772
Westbound	C	0.738	B	0.326
I-580 West of I-238				
Eastbound	C	0.533	C	0.678
Westbound	C	0.578	C	0.603
I-580 East of I-980/SH-24				
Eastbound	C	0.660	E	0.908
Westbound	D	0.775	C	0.703
I-580 West of I-980/SH-24				
Eastbound	D	0.713	E	0.983
Westbound	E	0.937	D	0.837

Table 3.16-2 *Continued*

Freeway Segment	Existing			
	AM Peak Hour		PM Peak Hour	
	LOS	V/C	LOS	V/C
I-980				
Eastbound	B	0.310	C	0.650
Westbound	C	0.644	B	0.316
SH 24 East of I-580				
Eastbound	B	0.305	D	0.817
Westbound	D	0.810	B	0.372

Notes: PCEs are passenger car equivalents (1 truck = 2 passenger car equivalents).

Source: Kittelson & Associates, 2012; Freeway Capacity Source: 2000 Highway Capacity Manual.

Traffic Conditions, Alternative Baseline. As explained in Section 3.0, Environmental Topics (footnote 36), the baseline used in the 2002 EIR for the analysis of transportation was also used in this study. The baseline employment for the project site was 2,044 employees, which reflect the last year of full employment on the Army Base. This level of employment was used to produce traffic forecasts for future no-project conditions.

3.16.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

This analysis compares potential environmental impacts of the 2012 Project to those identified in the 2002 EIR to determine if the Project would result in any new significant impacts or would cause substantial increase in the severity of a previously identified significant impact. The effects of the Project were assessed under existing conditions as well as two cumulative conditions: Cumulative Year 2020 conditions and Cumulative Year 2035 conditions.

3.16.5.1 Level of Service Methodology

Intersection Level of Service. The level of service (LOS) at study intersections was analyzed for the AM peak and PM peak hours using methodologies described in the 2000 Highway Capacity Manual. The intersection operations analysis was conducted using the Synchro analysis tool, as required by the City.

The level of service for signalized and unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, and lost travel time. Delay is a complex measure and is dependent upon a number of variables, including the number of vehicles in the traffic stream. For signalized intersections, delay is also dependent on the quality of signal progression, the signal cycle length, and the "green" ratio for each approach or lane group. For intersections with one or two stop signs, delay is dependent on the number of gaps available in the uncontrolled traffic stream. Table 3.16-3 and Table 3.16-4 define LOS and criteria for the signalized and unsignalized intersection analyses.

Freeway Mainline Segment Level of Service. The freeway mainline segments were assessed based on methodologies described in the Transportation Research Board's *Highway Capacity Manual* (2000 edition). This methodology uses vehicle density as the parameter to define level of service. Volume to capacity ratio can be used as a proxy for density to establish the level of service that was used in this analysis. The level of service definition for freeway mainline segments is presented in Table 3.16-5.

Table 3.16-3: 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, 2000. *Highway Capacity Manual*.

Table 3.16-4: Intersection Level of Service Definition for Unsignalized Intersections

Level of Service	Description of Traffic Conditions	Average Delay Per Vehicle (Seconds)
A	Little or no delay	≤10.0
B	Short traffic delay	>10.0 and ≤15.0
C	Average traffic delays	>15.0 and ≤25.0
D	Long traffic delays	>25.0 and ≤35.0
E	Very long traffic delays	>35.0 and ≤50.0
F	Extreme delays potentially affecting other traffic movements in the intersection	>50.0

Source: Transportation Research Board, 2000. *Highway Capacity Manual*.

Table 3.16-5: Freeway Mainline Segment Level of Service Definition

Level of Service	Expected Delay	Maximum V/C Ratio FFS = 75mph	Maximum V/C Ratio FFS = 70mph	Maximum V/C Ratio FFS = 65mph	Maximum V/C Ratio FFS = 60mph	Maximum V/C Ratio FFS = 55mph
A	Little or no delay	0.34	0.32	0.30	0.29	0.27
B	Short traffic delays	0.56	0.53	0.50	0.47	0.44
C	Average traffic delays	0.76	0.74	0.71	0.68	0.64
D	Long traffic delays	0.90	0.90	0.89	0.88	0.85
E	Very long traffic delays	1.00	1.00	1.00	1.00	1.00
F	Extreme delays	>1.00	>1.00	>1.00	>1.00	>1.00

Source: Transportation Research Board, 2000. *Highway Capacity Manual, Exhibit 23.2*. Washington, D.C.

3.16.5.2 Traffic Features of the Proposed 2012 Project

Trip Generation. A summary of project trip generation is provided in Table 3.16-6. A trip generation summary for the project evaluated in the 2002 EIR is provided in Table 3.16-7 for the 2012 Project area. A comparison of the trip generation for the 2012 Project to the 2002 Project components that fit in the same project area is provided in Table 3.16-8. A comparison of the number of daily trains served under various 2002 Project and 2012 Project scenarios is provided in Table 3.16-9. Additional details are provided in Appendix B-3. The 2012 Project would generated approximately 6,820 fewer daily trips than then 2002 Project, including 1,410 fewer trips during the AM peak hour and 1,220 fewer trips in the PM peak hour.

Table 3.16-6: 2012 Project Trip Generation

Land Use	Trips Generated						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Gateway Development Area							
CE1-CE3 (Transload Warehouse)	1,646	140	45	185	43	113	156
CC1-CC9, CW2-CW3 (Truck Services, Transload Warehouse, General Warehouse, Research & Development)	4,767	581	287	868	313	587	900
CN1-CN3 (Recycling Facilities, Truck Services)	994	183	64	247	64	209	273
Subtotal Gateway Development Area	*7,406*	*904*	*396*	*1,300*	*420*	*909*	*1,329*
Port Area (Includes OARB Port Area and Maritime Sub-districts)							
PL1-PL11 (Transload Warehouse, Truck Parking)	11,832	428	170	598	132	314	446
PR1 (Railyards) (excluding trucks to and from Ports America Terminal)	2,087	166	136	302	71	84	155
Subtotal Port Area	*13,919*	*594*	*306*	*900*	*203*	*398*	*601*
Total	**21,325**	**1,498**	**702**	**2,200**	**623**	**1,307**	**1,930**

[a] Office, R&D was treated as general office for the purpose of trip generation.
[b] Truck trips are reported as the equivalent number of passenger cars (1 truck = 2 cars).
[c] No new non-intermodal traffic would be generated due to changes in the size of rail terminal facilities.
Refer to Figure 2.5a for locations of the land uses
Source: Institute of Transportation Engineers, 2008. *Trip Generation, 8th Edition.*

Table 3.16-7: 2002 OARB Area Redevelopment EIR Trip Generation for 2012 Project Site

Land Use	Trips Generated						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Gateway Development Area							
East Subarea							
Office, R&D[a]	3,670	472	64	536	85	416	501
Central Subarea							
Office, R&D[b]	5,099	663	90	754	123	603	726
Light Industrial	3,214	384	52	436	57	416	473
Community/Civic (JATC)[c]	349	40	6	46	6	43	49
West Subarea							
Office	5,255	684	93	778	128	624	752
Park	232	7	2	9	8	11	19
North Subarea							
Maritime Support	561	21	31	52	21	23	44
Warehouse and Distribution	1,453	146	32	178	40	128	168
Subtotal Gateway Development Area	*19,832*	*2,417*	*371*	*2,789*	*468*	*2,264*	*2,732*
Port Area							
Marine Terminals							
Proposed Employment	10,630	894	146	1,040	192	769	962
Approved Employment	8,372	704	115	819	151	606	757
New Employment	2,258	190	31	221	41	163	204
New Intermodal Trucks[d]	3,182	153	163	316	34	79	113
New Off-site Trucks[d]	2,876	138	147	285	31	71	102
Rail Terminal[e]							
Proposed New Intermodal Facility	867	70	11	81	14	54	68
Subtotal Port Area	*8,316*	*481*	*341*	*822*	*106*	*313*	*419*
Total	**28,148**	**2,898**	**712**	**3,610**	**574**	**2,577**	**3,151**

Table notes on next page.

[a] Office, R&D was treated as general office for the purpose of trip generation.
[b] Ancillary retail space was included in the office space because small amount of retail would support office uses.
[c] JATC was treated as light industrial space for the purpose of trip generation.
[d] Truck trips are reported as the equivalent number of passenger cars (1 truck = 2 cars).
[e] No new non-intermodal traffic would be generated due to changes in the size of rail terminal facilities.

Source: Institute of Transportation Engineers, 1997. *Trip Generation, 6th Edition*.

Table 3.16-8: Comparison of Trip Generation for 2002 Project and 2012 Project

Land Use	Trips Generated						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Gateway Development Area							
2002 Project	19,832	2,417	371	2,789	468	2,264	2,732
2012 Project	7,406	904	396	1,300	420	909	1,329
Change	-12,426	-1,513	25	-1,489	-48	-1,355	-1,403
Port Area (Includes OARB Port Area but excludes Port of America to 2012 Project Rail Trips)							
2002 Project	8,316	481	341	822	106	313	419
2012 Project	13,919	594	306	900	203	398	601
Change	5,603	113	-35	78	97	85	182
Total							
2002 Project	28,148	2,898	712	3,610	574	2,577	3,151
2012 Project	21,325	1,498	702	2,200	623	1,307	1,930
Change	-6,823	-1,400	-10	-1,410	49	-1,270	-1,221

Source: Kittelson & Associates, 2012

Table 3.16-9: Comparison of Number of Trains Served Daily

Scenario	New Intermodal Railyard	West Gateway		OIG	UP	Total	
		Variant A	Variant B			Variant A	Variant B
2002 EIR Approved						23.4	
2002 EIR Proposed						25.4	
2012 Current	0.0	0.0	0.0	3.7	6.1	9.9	
2020 No Project	0.0	0.0	0.0	4.0	10.6	14.6	
2020 Proposed	5.7	3.0	1.0	3.8	6.2	18.7	16.7
2035 No Project	0.0	0.0	0.0	4.0	10.6	14.6	
2035 Proposed	5.9	3.0	1.0	4.0	10.6	23.5	21.5

Note:

- Trains shown for the West Gateway would arrive as 6,400-foot trains that would be split into two 3,200-foot trains for transport to the West Gateway. Two train movements (inbound and outbound) would result from transport of each 3,200-foot train. (Thus, 3-6, 400-foot trains are split into 6-3, 200-foot trains in a total of 12 movements per day.)
- The former Oakland Army Base had extensive rail facilities (over 29 miles of railroad track, including those operated by the Port and private entities, such as Oakland Terminal Rail [OTR]) that, prior to Base closure, served all essential areas of the Base. The pier/wharf areas West of Maritime and Street and the warehouse storage area east of Maritime Street were served by double tracks, which cross the main gate to EBMUD's Main Waste Water Treatment Plant. OTR itself handled about 1,559 trains in 1998.

OIG = Oakland International Gateway Railyard

UP = Union Pacific Railyard

Source: Kittelson & Associates, 2012; City of Oakland, 2002, *Army Base Area Redevelopment Plan Environmental Impact Report*.

The trip generation estimates for the two development alternatives for the West Gateway (described in detail in Chapter 2: Project Description) were compared and the West Gateway Research and Development/Open Space – Variant B was found to generate a higher number of both automobile and truck trips than the West Gateway Working Waterfront – Variant A. As a result, the Variant B was used as the basis for evaluating potential transportation impacts based on traffic volumes as it results in a more conservative (i.e., higher potential impact) analysis.

Trip Distribution. In addition to the number of trips generated on the 2012 Project site, travel outside the 2012 Project site would also be affected, both locally and regionally. Locally, development of the project would draw trips that are currently served nearby in West Oakland and other areas of the city to the warehouses on the 2012 Project site. In addition, development of the 2012 Project Railyard would accommodate traffic that would otherwise be served by the JIT/Oakland Intermodal Gateway (OIG) Railyard and the Union Pacific (UP) Railyard. Development of the 2012 Project Railyard would serve at least 95 percent intermodal cargo and would make available more capacity at the UP Railyard to serve domestic cargo that would otherwise need to be served in the Central Valley. The method used to evaluate how travel patterns would be affected is described below.

The effect of the 2012 Project development on the distribution of trips at the Port is based on the following factors:

- Marine terminal acres;
- Working track feet of the railyards;
- Marine & rail operating assumptions for days of operation, gate moves, and lifts;
- Intermodal cargo demand (based on Port of Oakland data);
- Marine lift capacity;
- Rail capacity operating at constrained conditions;
- Potential of the UP Railyard to expand and absorb additional demand;
- Hourly traffic proportions of daily truck traffic; and
- Characteristics of trains serving the railyards and intermodal warehouses.

The distribution of trucks serving various facilities on the 2012 Project site was based on the following:

- Warehouses served by rail and truck would serve only intermodal cargo (100 percent to and from the marine terminals);
- Warehouses served only by truck would have 10 percent trips to and from the marine terminals and 90 percent to and from roadways to destinations off-site;
- Truck trips for the recycling facilities (shown as CN1 and CN2 in Figure 2.-5a) would comprise 90 percent of total trips for CN1 and 80 percent of total trips for CN2, none of which would have origins or destinations at the Port;
- Truck services facilities would serve 80 percent of truck trips at the port and 20 percent off-site;

- Truck parking facilities would serve 80 percent of truck trips at the port and 20 percent off-site and comprise 80 percent of total trips at those facilities; and
- Truck trips for R&D development would comprise 1.84 percent of total trips.

Project trips were distributed to the transportation network using the assumptions described above with application using the Alameda Countywide Travel Model. Trips were distributed using a select zone process as described in the following section, Traffic Forecasting Methodology.

Travel Forecasting Methodology. Travel forecasts were prepared using the current version (June 2011) of the Alameda CTC Countywide Travel Demand Model (the Model) which is consistent with Association of Bay Area Governments' (ABAG) Projections 2009, the latest MTC Regional Transportation Plan, and the latest Alameda Countywide Plan. Specifically, future model networks include the fourth bore of the Caldecott Tunnel, which is scheduled to open in 2014.

The Model's trip generation process computes person trips based on households and population as well as employment. Truck trips are forecast based on a special generator module that pinpoints truck activity from origin-destination surveys and truck counts and allocates these to special truck generators like the Port of Oakland, Oakland Airport and external Bay Area destinations. Trips are distributed based on the standard gravity type model and are then split into walk, bike, and auto and transit modes prior to assigning them onto the highway and transit networks.

The model inputs were reviewed against the project description in the study area for accuracy by comparing them to traffic counts and roadway configurations from recent aerial pictures. Based on a review of the project plans, the Model was modified to include additional traffic analysis zones (TAZs) and network details to better represent the project site. A total of twenty finer TAZs were added in the project area along with additional roadway network to better define zonal access, cross streets and project circulation. Furthermore, minor coding corrections were made to the network to reflect any recent roadway improvements that were not accurately reflected, including the West Grand Avenue improvements, 7th Street improvements, and turn prohibitions at Powell Street and Frontage Road.

Model data sets were developed for all analysis scenarios, including:

- Existing (Year 2011) No Project
- Existing (Year 2011) plus Project
- Year 2020 Cumulative No Project
- Year 2020 Cumulative plus Project
- Year 2035 Cumulative No Project
- Year 2035 Cumulative plus Project

Truck travel within the Port and to areas outside the Port was computed based on information on operational Origin-Destination patterns and ITE trip generation and was manually added into the model to override the raw model estimates in order to enhance the Model output for project area traffic assignments.

The trip assignment results were extracted for the study intersections and reviewed for growth and accuracy. The Model trip assignment constraining procedure was applied to develop the forecast for future No Project conditions in order to develop a realistic background traffic forecasts for the future years. In order to maintain the most conservative estimates, the plus project scenarios were analyzed using unconstrained trip assignments. A select zone analysis was conducted for all project related TAZs under both No Project and plus Project conditions. The increment of the select zone assignments between the plus project and no project runs was then added to the constrained adjusted future traffic volumes to develop future plus project volumes. For the Existing plus project scenario, the project increment from Year 2020 was added to the existing year counts to derive the traffic volumes for Existing plus Project conditions. Lastly, the intersection volumes were then manually adjusted using industry standard incremental adjustment with "Furness" balancing technique[165] to minimize the base year model error against counts.

A more detailed description of the travel forecasting methodology and procedures is provided in Appendix B-4.

Existing Plus Project Conditions. The peak hour intersection volumes for the Existing plus Project conditions developed using methodology described above are shown in Appendix B-2. The resulting levels of service are presented in Table 3.16-10. The freeway segment volumes and levels of service for the Existing plus Project scenario are shown in Table 3.16-11.

3.16.5.3 CEQA Thresholds/Criteria of Significance

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

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, specifically:

Traffic Load and Capacity Thresholds

a. At a study, signalized intersection which is located **outside the Downtown** area,[166] the project would cause the level of service (LOS) to degrade to worse than LOS D (i.e., LOS E);

b. At a study, signalized intersection which is located **within the Downtown** area, the project would cause the LOS to degrade to worse than LOS E (i.e., LOS F);

c. At a study, signalized intersection **outside the Downtown** area where the level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., LOS F);

[165] The "Furness" technique, developing in 1970, is a process used to balance the 12-movement volumes at an intersection. It takes a given matrix and factor up/down to fit a given set of origin and destination totals.

[166] The Downtown area is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by the West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south, and I-980/Brush Street to the west.

Table 3.16-10: Intersection Level of Service – Existing Plus Project Conditions

Number	Intersection	2002 EIR Existing + Redevelopment				Existing				Existing + 2012 Project			
		AM Peak Hour		PM. Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]
1	W. Grand Avenue & Maritime Street	**F**	**298.1**	**F**	**262.6**	B	16.4	B	18.0	C	32.7	C	30.9
2	W. Grand Avenue & I-880 Frontage Road	**E**	**79.6**	**F**	**171.1**	C	21.9	C	23.2	C	27.6	C	25.7
3	W. Grand Avenue & Mandela Parkway[b]	B	17.4	C	31.3	A	5.4	A	6.4	A	6.0	A	6.8
4	W. Grand Avenue & Adeline Street	B	13.9	B	15.4	D	43.6	F	225.1	D	40.7	F	209.8
5	W. Grand Avenue & Market Street	B	10.4	A	10.0	B	18.1	C	23.0	B	17.8	B	19.8
6	W. Grand Avenue & San Pablo Avenue	B	12.5	B	12.5	B	17.3	B	18.5	B	17.1	B	18.2
7	W. Grand Avenue & MLK Jr. Way[c]	B	11.7	B	15.0	B	13.2	B	14.0	B	13.2	B	13.9
8	W. Grand Avenue & Northgate Avenue[c]	C	25.2	C	25.0	C	23.1	B	18.7	C	23.0	B	19.9
9	W. Grand Avenue & Harrison Street[c]	C	25.9	C	24.7	D	37.0	C	31.6	D	36.9	C	31.8
10	7th Street & Maritime Street	**F**	**126.8**	**E**	**78.5**	C	25.0	D	36.4	C	21.1	B	19.8
11	7th Street & I-880 SB On-Ramp	A	5.3	B	14.0	A	2.0	A	3.3	A	2.2	A	4.5
12	7th Street & I-880 NB Off-Ramp	D	43.1	C	33.0	C	21.2	C	20.7	D	38.1	**F**	**83.1**
13	7th Street & Peralta Street	A	7.9	A	7.8	A	9.2	B	10.2	A	9.1	B	10.1
14	7th Street & Mandela Parkway	B	14.5	B	15.6	C	25.0	C	23.5	C	24.9	C	22.5
15	7th Street & Union Street	A	8.6	B	11.2	B	17.8	B	17.6	B	17.7	B	18.4
16	7th Street & Adeline Street	B	10.7	B	12.0	B	10.7	A	9.7	B	10.4	A	9.8
17	7th Street & Market Street	C	20.7	C	20.6	B	18.1	B	14.9	B	17.8	B	15.0
18	7th Street & Harrison Street[c]	B	10.8	B	10.9	C	26.6	F	96.6	C	27.6	**F**	**98.6**
19	7th Street & Jackson Street[c]	E	61.5	C	23.8	B	11.2	A	8.3	B	11.0	A	8.3
20	6th Street & Jackson Street[c]	B	10.4	B	11.7	B	18.8	E	70.0	C	22.6	E	69.9
21	5th Street & Union/ I-880 N. Ramps	C	33.0	C	27.2	D	50.3	D	41.5	C	32.2	D	45.7
22	5th Street & Adeline Street	C	32.8	C	30.8	C	25.9	C	23.7	D	53.4	C	26.5
23	I-880 Off-Ramp & Market Street	C	20.3	C	22.6	B	14.6	B	17.9	B	14.1	B	17.6
24	5th Street & Broadway[c]	C	21.2	C	34.4	C	32.2	E	74.8	C	32.4	E	77.2
25	3rd Street & Adeline Street	B	13.3	B	13.1	B	11.2	B	13.1	C	16.2	C	17.1
26	3rd Street & Market Street	C	15.8	B	14.1	A	4.8	A	4.6	A	5.5	A	4.9
27	14th Street & Mandela Parkway[b]	A	9.4	A	8.2	B	12.0	B	11.8	B	12.0	C	21.5
28	12th Street & Brush Street[c]	C	31.9	C	22.4	D	42.9	B	19.2	D	44.4	B	19.3
29	12th Street & Castro Street[c]	B	15.5	B	19.1	C	26.6	F	89.6	C	26.3	**F**	**93.3**
30	27th Street & SR24/580 SB Off-Ramp	B	11.5	B	16.3	B	12.9	B	13.7	B	12.7	B	13.7
31	27th Street & SR24/580 NB On-Ramp	B	10.1	C	26.1	B	19.1	C	34.9	B	19.2	D	35.4
32	Adeline Street & San Pablo Avenue	C	21.0	C	23.1	B	13.2	B	15.7	B	13.1	B	15.7
33	MacArthur Blvd. & Market Street	B	15.9	B	17.1	B	17.5	C	21.9	B	17.5	C	21.9
34	Powell Street & I-80 Frontage Road	C	21.3	C	22.4	B	15.6	C	24.5	B	15.7	C	25.9
35	Powell Street & I-80 NB Ramps	C	25.5	D	48.4	B	14.6	B	18.0	B	15.0	B	19.0
36	Powell Street & Christie Avenue	C	29.9	C	30.5	C	27.0	D	45.8	C	26.9	D	47.5
37	Powell Street & Hollis Street	C	22.6	C	31.6	C	21.7	D	38.3	C	22.1	D	38.8
38	Powell Street/Stanford & San Pablo Avenue	C	32.5	C	34.9	D	35.1	D	37.4	D	36.3	D	38.7
39	Stanford Avenue & Market Street	C	28.7	C	32.4	C	23.5	C	28.5	C	24.0	C	29.0

Table 3.16-10 *Continued*

Number	Intersection	2002 EIR Existing + Redevelopment				Existing				Existing + 2012 Project			
		AM Peak Hour		PM. Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]
40	Stanford Avenue & MLK Jr. Way	B	12.5	D	46.4	C	32.8	F	82.3	C	32.9	F	82.6
41	7th Street & Ashby Avenue	C	34.5	D	49.5	C	33.2	D	38.3	C	34.1	D	40.3
42	San Pablo Avenue & Ashby Avenue	C	30.8	C	33.7	C	29.6	D	52.9	C	32.4	**E**	**60.3**
43	Marina Village & Constitution Way	C	20.3	C	26.6	B	13.8	B	14.3	B	13.8	B	14.3
44	Atlantic Avenue & Webster Street	C	32.5	C	28.7	C	32.9	C	26.4	C	32.9	C	26.5
45	Atlantic Avenue & Constitution Way	C	21.8	C	20.3	B	13.8	B	12.9	B	13.9	B	12.9
46	Maritime Street & Burma Road[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	18.3	C	30.6
47	Maritime Street & 14th Street[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	D	47.5	A	5.9
48	Navy Roadway & 7th Street Alt. 1[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	14.6	B	15.8
48	Navy Roadway & 7th Street Alt. 2[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	5.5	A	6.0
49	Burma Road & W. Truck Services[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	5.0	A	5.1

[a] Delay in seconds per vehicle
[b] Weighted average of two intersections operating with one controller.
[c] Defined as a downtown intersection
[d] Locations to be constructed or reconstructed as a part of 2012 project

Shading denotes potential significant impacts which are further discussed in Section 3.16.5.4.

Bold denotes significant impacts identified in the 2002 EIR.

Source: Kittelson & Associates, 2012.

Table 3.16-11: Freeway Segment Level of Service - Existing Plus Project Scenario

	2002 EIR Existing + Project				Existing				Existing Plus 2012 Project					Existing		Project Traffic			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			Traffic Volume (PCEs)		(in PCEs)		Potentially Significant?	
Freeway Segment	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**Lanes**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
I-80 at the Bay Bridge																			
Eastbound	C	0.687	F	1.248	C	0.533	E	0.973	C	0.536	E	0.973	5	6393	11676	38	0		
Westbound	F	1.213	D	0.865	E	0.938	C	0.691	E	0.938	C	0.692	5	11251	8290	0	10		
I-80 between I-880 and I-580																			
Eastbound	B	0.446	D	0.919	B	0.360	C	0.660	B	0.360	C	0.660	5	4236	7755	0	0		
Westbound	D	0.900	C	0.571	C	0.663	C	0.489	D	0.691	C	0.511	5	7630	5621	318	258		
I-80 East of I-80/I-580 Split																			
Eastbound	C	0.655	**F**	**1.310**	B	0.559	E	0.993	C	0.568	F	1.012	5	6711	11915	103	233		Yes
Westbound	**F**	**1.282**	D	0.832	F	1.004	D	0.725	F	1.033	D	0.744	5	11799	8514	334	231		
I-880 Connector to I-80 East																			
Northbound	D	0.838	**F**	**1.088**	C	0.702	D	0.746	D	0.719	D	0.796	2	3299	3506	79	236		
Southbound	D	0.903	C	0.627	C	0.580	B	0.505	C	0.651	C	0.539	2	2786	2424	339	165		
I-880 Connector to I-80 West																			
Northbound	B	0.536	D	0.811	B	0.382	B	0.437	B	0.386	B	0.437	2	1797	2055	19	0		
Southbound	C	0.641	C	0.571	A	0.260	B	0.412	A	0.266	B	0.412	2	1221	1935	27	0		
I-880 North of 7th Street																			
Northbound	B	0.525	C	0.707	B	0.452	C	0.613	B	0.455	C	0.614	3	3188	4321	22	8		
Southbound	B	0.465	C	0.744	B	0.407	C	0.651	B	0.421	C	0.652	3	2866	4588	102	9		
I-880 South of 7th Street																			
Northbound	**F**	**1.021**	D	0.812	D	0.791	D	0.711	E	0.854	D	0.750	3	5337	4798	429	263		
Southbound	C	0.548	**F**	**1.036**	B	0.459	D	0.806	C	0.506	D	0.846	3	3166	5561	328	279		
I-880 North of I-980																			
Northbound	**F**	**1.049**	C	0.736	D	0.822	C	0.638	E	0.930	D	0.697	3	5675	4404	739	402		
Southbound	B	0.445	E	0.932	B	0.365	C	0.730	B	0.398	D	0.766	3	2625	5256	243	261		
I-880 South of I-980																			
Northbound	**F**	**1.169**	F	1.029	E	0.969	E	0.910	F	1.047	E	0.954	4	8724	8188	700	399	Yes	
Southbound	C	0.723	**F**	**1.017**	C	0.604	D	0.806	C	0.640	D	0.856	4	5681	7581	338	461		
I-880 North of I-238																			
Northbound	**F**	**1.087**	F	1.137	D	0.836	E	0.934	E	0.902	E	0.976	4	8029	8966	626	405		
Southbound	**F**	**1.111**	**F**	**1.094**	E	0.968	D	0.885	F	1.007	E	0.932	4	9100	8322	367	441	Yes	
I-880 South of I-238																			
Northbound	**F**	**1.020**	F	1.144	D	0.814	E	0.931	D	0.845	E	0.944	4	7654	8748	284	126		
Southbound	F	1.252	**F**	**1.150**	F	1.032	E	0.922	F	1.040	E	0.942	4	9699	8668	73	187		
I-238																			
Eastbound	B	0.517	D	0.882	B	0.459	D	0.732	C	0.502	D	0.772	3	3169	5048	292	278		
Westbound	D	0.855	B	0.369	C	0.698	B	0.318	D	0.749	B	0.359	3	4923	2243	359	290		

Table 3.16-11 *Continued*

	2002 EIR Existing + Project				Existing				Existing Plus 2012 Project					Existing		Project Traffic			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			Traffic Volume (PCEs)		(in PCEs)		Potentially Significant?	
Freeway Segment	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**Lanes**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
I-580 East of I-238																			
Eastbound	C	0.557	E	0.956	B	0.462	D	0.772	B	0.488	D	0.798	5	5429	9069	306	307		
Westbound	D	0.926	B	0.399	C	0.738	B	0.326	D	0.772	B	0.353	5	8853	3916	417	321		
I-580 West of I-238																			
Eastbound	C	0.694	D	0.869	C	0.533	C	0.678	C	0.534	C	0.683	4	5115	6510	15	44		
Westbound	D	0.785	C	0.753	C	0.578	C	0.603	C	0.580	C	0.606	4	5544	5784	26	30		
I-580 East of I-980/SH-24																			
Eastbound	D	0.854	**F**	**1.257**	C	0.660	E	0.908	C	0.662	E	0.918	4	6202	8534	23	96		
Westbound	**F**	**1.112**	E	0.930	D	0.775	C	0.703	D	0.785	C	0.707	4	7437	6745	96	44		
I-580 West of I-980/SH-24																			
Eastbound	D	0.860	**F**	**1.281**	D	0.713	E	0.983	D	0.718	E	0.995	5	8020	11061	55	129		
Westbound	**F**	**1.230**	**F**	**1.011**	E	0.937	D	0.837	E	0.947	D	0.844	5	10538	9412	111	80		
I-980																			
Eastbound	B	0.386	D	0.809	B	0.310	C	0.650	B	0.310	C	0.650	4	2911	6111	0	1		
Westbound	D	0.800	B	0.391	C	0.644	B	0.316	C	0.650	B	0.316	4	6052	2970	58	0		
SH 24 East of I-580																			
Eastbound	B	0.395	**F**	**1.058**	B	0.305	D	0.817	B	0.306	D	0.826	4	2865	7680	8	80		
Westbound	**F**	**1.094**	B	0.459	D	0.810	B	0.372	D	0.822	B	0.373	4	7609	3501	119	5		

Note: PCEs are passenger car equivalents (1 truck = 2 passenger car equivalents).

Shading denotes potential significant impacts which are further discussed in Section 3.16.5.4.

Bold denotes significant impacts identified in the 2002 EIR.

Source: Kittelson & Associates, 2012; Freeway Capacity Source: 2000 Highway Capacity Manual.

d. At a study, signalized intersection for **all areas** where the level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., LOS F);

e. At a study, signalized intersection for all areas where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity ("V/C") ratio increases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable);

f. At a study, unsignalized intersection the project would add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume traffic signal warrant;

g. For a roadway segment of the Congestion Management Program (CMP) Network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project;

h. Cause congestion of regional significance on a roadway segment on the Metropolitan Transportation System (MTS) evaluated per the requirements of the Land Use Analysis Program of the CMP;[167]

i. Result in substantially increased travel times for AC Transit buses;

Traffic Safety Thresholds

j. Directly or indirectly cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses;

k. Directly or indirectly result in a permanent substantial decrease in pedestrian safety;

l. Directly or indirectly result in a permanent substantial decrease in bicyclist safety;

m. Directly or indirectly result in a permanent substantial decrease in bus rider safety;

n. Generate substantial multi-modal traffic traveling across at-grade railroad crossings that cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard;

Other Thresholds

o. Fundamentally conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment;

[167] Threshold h only applies to a land use development project that involves either a) a general plan amendment that would generate 100 or more PM peak hour trips above the current general plan land use designation, or b) an EIR and the project would generate 100 or more PM peak hour trips above the existing condition. Because the Project would involve neither a general plan amendment nor an EIR, this threshold is not assessed in this analysis. Further, as shown in Table 3.16-9, the 2012 Project would generate significantly lower number of trips than the 2002 EIR. Moreover the MTS operates with fewer significant impacts from the 2012 Project as compared to the 2002 Project.

p. Result in a substantial, though temporary, adverse effect on the circulation system during construction of the project; or

q. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

Cumulative Impacts

r. A project's contribution to cumulative impacts is considered "considerable" (i.e., significant) when the project exceeds at least one of the thresholds listed above in a future year scenario.

These criteria are discussed below.

3.16.5.4 Project Impacts

a) At a study, signalized intersection which is located outside the Downtown area, would the project cause the level of service (LOS) to degrade to worse than LOS D (i.e., LOS E)?

7th Street & I-880 Northbound Off-Ramp (#12). Implementation of the 2012 Project would cause the level of service at the study signalized intersection of 7th Street & I-880 Northbound Off-Ramp to degrade to LOS F during the PM peak hour under Existing plus Project conditions. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-1, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-1:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Engineering Division and Caltrans for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection. 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 ADA standards (according to Federal and State Access Board guidelines) at the time of construction.

Current City Standards call for the elements listed below:

- 2070L Type Controller
- GPS communication (clock)
- Accessible pedestrian crosswalks according to Federal and State Access Board guidelines
- City Standard ADA wheelchair ramps
- Full actuation (video detection, pedestrian push buttons, bicycle detection)
- Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines
- Countdown Pedestrian Signals
- Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan for a maximum of 600 feet
- Signal timing plans for the signals in the coordination group. The project sponsor shall fund, prepare, and install the approved plans and improvements.

Significance After Implementation: Less Than Significant (No New Impact)

San Pablo Avenue & Ashby Avenue (#42). Implementation of the 2012 Project would cause the level of service at the study signalized intersection of San Pablo Avenue & Ashby Avenue to degrade to LOS E during the PM peak hour under Existing plus Project conditions. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-2, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-2:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the Project Sponsor shall coordinate with City of Berkeley and Caltrans, and shall fund, prepare, and install the improvements consistent with City of Berkeley and/or Caltrans standards.

Significance After Implementation: Less Than Significant

b) At a study, signalized intersection which is located within the Downtown area, would the project cause the LOS to degrade to worse than LOS E (i.e., LOS F)?

As shown in Table 3.16-10, the 2012 Project would not cause the LOS to degrade to worse than LOS E at a study signalized intersection located within the downtown area under Existing plus Project conditions. Therefore, the 2012 Project would not create a significant impact under Existing plus Project conditions and no mitigation measures are required.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

c) At a study, signalized intersection outside the Downtown area where the level of service is LOS E, would the project cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., LOS F)?

As shown in Table 3.16-10, the 2012 Project would not cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., LOS F) at a study signalized intersection outside the downtown area where the level of service is LOS E. Therefore, the 2012 Project would not create a significant impact under Existing plus Project conditions and no mitigation measures are required.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

d) At a study, signalized intersection for all areas where the level of service is LOS E, would the project cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., LOS F)?

As shown in the intersection LOS worksheets in Appendix B-5, the 2012 Project would not cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., LOS F) at a study signalized intersection for all areas where the level of service is LOS E. Therefore, the 2012 Project would not create a significant impact under Existing plus Project conditions and no mitigation measures are required.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

e) At a study, signalized intersection for all areas where the level of service is LOS F, would the project cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity ("V/C") ratio increases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable)?

7th Street & Harrison Street (#18). The intersection of 7th Street & Harrison Street would operate at LOS F without the 2012 Project during the PM peak hour under Existing plus Project conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than two (2) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS B.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-3, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-3:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

Significance After Implementation: Less Than Significant (No New Impact)

12th Street & Castro Street (#29). The intersection of 12th Street & Castro Street would operate at LOS F without the 2012 Project during the PM peak hour under Existing plus Project conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than two (2) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS B.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-4, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-4:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

Significance After Implementation: Less Than Significant (No New Impact)

f) At a study, unsignalized intersection would the project add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume traffic signal warrant?

The 2012 Project would not add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume traffic signal warrant at a study unsignalized intersection. Therefore, the 2012 Project would not create a significant impact under Existing plus Project conditions and no mitigation measures are required.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

g) Would the project cause a roadway segment of the Congestion Management Program (CMP) to a) degrade to LOS F; or b) increase the V/C ratio by more than three percent for a roadway segment that would operate at LOS F without the project?

The 2002 EIR identified significant impacts along the following segments:

- I-80 East of I-80/I-580 Split
- I-880 connector to I-80 East
- I-880 from 7th Street to segment south of I-238
  - South of 7th Street
  - North of I-980
  - South of I-980
  - North of I-238
  - South of I-238
- I-580
  - East of I-980/SH-24
  - West of I-980/SH-24
- SH-24 East of I-580

As shown in Table 3.16-11, only three segments would experience potentially significant impacts as a result of the Project as compared to ten segments in the 2002 EIR. These three segments include:

- I-80 East of I-80/I-580 Split
- I-880 South of I-980
- I-880 North of I-238

As all three segments were identified to be significant impacted in the 2002 EIR, the Project would not result in any new significant impact. Further, with the reduced trip generation, the 2012 Project would not substantially increase the severity of the previously identified impacts. However, while implementation of 2002 EIR Mitigation Measure 4.3-4 (superseded by SCA TRANS-1 for the 2012 Project) would reduce traffic demand on the freeway system, the residual impact would remain significant and unavoidable.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.3-4

2012 Mitigation: SCA TRANS-1

Significance After Implementation: Significant and Unavoidable (No New Impact and would not substantially increase the severity of the impact identified in the 2002 EIR)

h) Would the project result in substantially increased travel times for AC Transit buses?

The 2012 Project is not being directly served by existing AC Transit routes since the prior service was cancelled due to lack of ridership. As shown in the intersection analysis discussed above, all potential project impacts at the study intersections would be mitigated with the proposed mitigation measures. Therefore, the project would not substantially affect the operations on roadways used by AC Transit buses and would not result in substantially increased travel times for AC Transit buses. The project may result in increased ridership on AC Transit buses through West Oakland BART station transit hub and other stops in West Oakland which may result in increased loading and unloading time at bus stops. However, the ridership increase is not projected to be substantial such that it would result in a significant travel time impact for AC Transit buses. Therefore, the 2012 Project would not result in a new significant impact. This is a new threshold not previously assessed in the 2002 EIR.

2002 Impact: Not Applicable

2012 Impact: Less Than Significant

2002 Mitigation: Not Applicable

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: No New Impact

i) Would the project directly or indirectly cause or expose roadway users to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses?

The 2012 Project includes features that would reduce transportation hazards. Both the improved Maritime Street and its northern extension (Wake Avenue) and the realigned Burma Road would include left turn pockets to facilitate turning movements and minimize obstruction to traffic on the through lanes. Under both 7th Street access improvement variants, a private tug road is provided as an alternative to Maritime Street for trucks moving between the Outer Harbor marine terminals and the intermodal rail terminal. This connection would reduce conflicts and reduce potential congestion on Maritime Street.

The 2012 Project would reduce the shoulder on either side of Maritime Street from the existing eight feet to six feet. The proposed six foot-shoulder would not be adequate to accommodate trucks that would queue along southbound Maritime Street while awaiting entry to Ports America's gate. The trucks would intrude onto the southbound travel lane; thereby forcing southbound vehicles to queue behind or merge into the left southbound travel lane to drive around the queuing trucks.

While the final site plan has not yet been developed, emergency access routes to most of the site and adjacent properties appear to be reasonably well-served. Wake Avenue currently extends approximately 1,100 feet to the EBMUD MWWTP. The project would relocate the existing Wake Avenue access to the EBMUD MWWTP further to the west at a location that would shorten the distance from West Grand Avenue to the MWWTP to approximately 500 feet. The project would also provide a secondary access from West Burma Road to the MWWTP.

The project would create new East Burma Road that would extend approximately 2,000 feet east of Maritime Street. Secondary emergency access would be provided from relocated Wake Avenue through the properties in the North Gateway. 14th Street extends from Maritime Street approximately 1,800 feet to the east. Secondary emergency access to the east end of 14th Street is currently provided via driveways controlled by gates at Maritime Street. The Project would shorten the length of 14th Street to approximately 1,000 feet and secondary emergency access would be provided from new driveways along Maritime Street.

West Burma Road extends approximately 5,000 feet from Maritime Street to the base of the Bay Bridge. Emergency access routes to the West Gateway area may potentially be limited due to physical constraints of the site. As stated in Impact 4.3-4 of the 2002 EIR, this would result in potentially significant impact. Furthermore, depending on site-specific design that is not currently defined, the 2012 Project could potentially cause or expose roadway users to other permanent and substantial transportation hazard due to a new or existing physical design feature, incompatible uses or increase in transport trucks on neighborhood streets. Therefore, similar to Impact 4.3-3 in the 2002 EIR, the project impact is considered potentially significant.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.3-5, 4.3-6, 4.3-7, 4.3-8

2012 Mitigation: 2002 EIR Mitigation Measures 4.3-5, 4.3-7 and 4.3-8 supplemented with Mitigation Measure 3.16-5 through Mitigation Measures 3.16-15a and 3.16-15b provided below.

<u>With regard to Maritime between 7th Street and West Grand Avenue:</u>

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.

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 PUD process.

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.

<u>With regard to North Maritime (formerly Wake Avenue):</u>

Mitigation Measure 3.16-8: The City shall provide 2 travel lanes in each direction in this area with shoulders on each side for bicycle lanes. The exact

dimensions of these elements will be determined by the City's Transportation and Infrastructure Divisions during the PUD process.

With regard to Burma between Maritime and West Oakland (Burma East):

Mitigation Measure 3.16-9: The City shall provide a 9-foot-wide area along the entire north side of Burma Street in this area to accommodate utilities and a sidewalk; bicycles will be accommodated on the shoulder; exact dimensions of these elements will be determined by the City's Transportation and Infrastructure Divisions during the PUD process.

Mitigation Measure 3.16-10: The City shall provide a 7-foot-wide area along the entire south side of Burma Street in this area to accommodate utilities; bicycles will be accommodated on the shoulder; exact dimensions of these elements will be determined by the City's Transportation and Infrastructure Divisions during the PUD process.

With regard to Burma between Maritime and the Railroad Tracks (Burma West)

Mitigation Measure 3.16-11: The City shall provide an 9-foot-wide area along the entire south side of Burma Street in this area to accommodate utilities and a sidewalk; bicycles will be accommodated on the shoulder; exact dimensions of these elements will be determined by the City's Transportation and Infrastructure Divisions during the PUD process.

Mitigation Measure 3.16-12: The City shall provide a 20-foot-wide area along the entire north side of Burma Street in this area to accommodate utilities and a Class 1 bicycle path; exact dimensions of these elements will be determined by the City's Transportation and Infrastructure Divisions during the PUD process.

With regard to Burma between the Railroad Tracks and the Gateway Park (Burma Far West):

Mitigation Measure 3.16-13: The City shall provide an 8-foot-wide area along the entire south side of Burma Street in this area to accommodate utilities and a sidewalk; bicycles will be accommodated on the shoulder with a Class 2 bicycle lane; exact dimensions of these elements will be determined by the City's Transportation and Infrastructure Divisions during the PUD process.

Mitigation Measure 3.16-14: The City shall provide a shoulder along the entire north side of Burma Street in this area to accommodate bicycles with a Class 2 bicycle lane; exact dimensions of these elements will be determined by the City's Transportation and Infrastructure Divisions during the PUD process.

With regard to Emergency Access:

Mitigation Measure 3.16-15a: The Project Sponsor shall develop, in consultation and coordination with adjacent property owners, including EBMUD, an emergency response plan for the 2012 Army Base Project, which addresses emergency ingress/egress.

Mitigation Measure 3.16-15b: The Project Sponsor shall include in the design of West Burma Road turnouts and turnarounds at the appropriate locations and dimensions as required by the fire Department, in order to allow for appropriate ingress and egress of emergency vehicles.

Significance After Implementation: Less Than Significant (No New Impact)

j) Would the project directly or indirectly result in a permanent substantial decrease in pedestrian safety?

The 2012 Project would enhance pedestrian safety on Maritime Street, Burma Road and access to wharf open space by providing sidewalks on one side of these roadways where there is none currently. However, Maritime Street is a heavily used high-speed truck route, where a greater width of sidewalk is needed to provide protection for pedestrians. As shown in Figure 2-8, the project proposes a 10-foot area on the west side of Maritime Street that includes a 5-foot through passage zone and a 5-foot utility zone.

The 2012 Project includes new left turn pockets on Burma Road, which may increase pedestrian crossing distance and exposure to vehicles. Additional driveways may also be installed on Maritime Street to improve traffic circulation but may potentially increase vehicle-pedestrian conflicts. Since Burma Road is not explicitly defined in the Pedestrian Master Plan, it is assumed to be a local/ neighborhood route where a 5-foot through passage zone is recommended. Therefore, in addition to a 10-foot trail on the north side of West Burma Road, a 5-foot sidewalk is proposed on the south side of West Burma Road and on the north side of East Burma Road.

The project provides a sidewalk adjacent to the roadway on East Burma Road instead of a 4-foot clear zone between the roadway and sidewalk as required in the Pedestrian Master Plan. Other site-specific design features, which are undefined currently, may also affect safety for pedestrians. Therefore, similar to Impact 4.3-3 in the 2002 EIR, the project impact is considered potentially significant.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.3-5, 4.3-6 and 4.3-7

2012 Mitigation: 2002 EIR Mitigation Measure 4.3-5

Significance After Implementation: Less Than Significant (No New Impact)

k) Would the project directly or indirectly result in a permanent substantial decrease in bicyclist safety?

The 2012 Project would enhance bicyclist safety by providing designated bicycle facilities on Maritime Street and Burma Road. Both proposed variants of the 7th Street improvement at Maritime Street include bicycle connection to existing Class 1 facility on 7th Street, which would be preserved as a part of the project. The proposed Class 1 bike path will connect the existing Class 1 facility on 7th Street to the proposed Class 1 bike path being constructed by Caltrans as part of the Bay Trail. This connection will occur on West Burma Road at the driveway of the proposed Engineers Road connection.

However, the additional driveways that may be installed on Maritime Street and the proposed Engineers Road extension to Burma Road to improve traffic circulation may create additional conflict points between vehicles and bicyclists on the Class 1 bike path. Further, for those bicyclists that decide not to continue on the Bay Trail along Engineers Road, the transition between the Class 1 bike path and Class 3 bike route on West Burma Road could potentially present safety challenges for bicyclists. This transition occurs as West Burma Road curves southeastward towards Maritime Street. The City limits a signage-only Class 3 bicycle route to the Oakland Hills area where the use is primarily for recreational purposes, therefore, a Class 2 bicycle lane should be used "…where the outside lane (with parking prohibited) is 15' or more." While a 12-foot travel lane is proposed on each direction along this segment, the project also includes a five-foot shoulder on each side, which would provide sufficient space for a bicycle lane in the southwest direction of West Burma Road. Because bicyclists traveling on the northeast direction on West Burma Road would have to cross over westbound traffic lane to reach the trail entry point at the driveway for the proposed Engineers Road, a location where sight distance would inhibit them from seeing around the bend for on-coming traffic, it is proposed that the Class 3 bicycle lane be removed from West Burma Road in the northeast direction. Any bicyclists at the proposed Gateway Park should be redirected to the proposed Class 1 bike trail to the north of the Caltrans Maintenance Facility.

Between the Engineers Road intersection and Maritime Street, at least a 10-foot wide Class 1 bicycle path would need to be installed on the north side of West Burma Road. This path would be connected not only to the bicycle route described above, it would also be connected to a planned bicycle path to be installed by Caltrans along I-80 freeway that would provide bicycle linkage to Emeryville and beyond. A 10-foot wide Class 1 bicycle path is also proposed on the east side of Maritime Street between West Grand Avenue and 7th Street. Both these bicycle paths are necessary to resolve safety issues.

Other site-specific design features, which are undefined currently, may also affect safety for bicyclists. Therefore, similar to Impact 4.3-3 in the 2002 EIR, the project impact is considered potentially significant.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.3-5 and 4.3-7

2012 Mitigation: 2002 EIR Mitigation Measure 4.3-5 and supplemented with Mitigation Measures 3.16-5 through 3.16-15a and 3.16-15b provided above

Significance After Implementation: Less Than Significant (No New Impact)

l) Would the project directly or indirectly result in a permanent substantial decrease in bus rider safety?

While there is no bus stop in the project area, the 2012 Project may generate new bus ridership. The proposed enhancements on Burma Road and Maritime Street would provide improved bicycle and pedestrian connections to 7th Street and the West Oakland BART station transit hub as well as other bus stop locations in West Oakland. However, the number of new bus riders is not anticipated to be substantial enough to adversely affect the bus stop locations and directly and indirectly result in a permanent substantial decrease in bus rider safety. Therefore, the 2012 Project would not result in a new significant impact and would not substantially increase the severity of a significant impact identified in the 2002 EIR. This threshold was assessed as a part of Impact 4.3-3 of the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.3-5, 4.3-6 and 4.3-7

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

m) Would the project generate substantial multi-modal traffic traveling across at-grade railroad crossings that cause or expose roadway users to a permanent and substantial transportation hazard?

The following discussion applies to both the West Gateway Working Waterfront - Variant A and West Gateway Research and Development/Open Space - Variant B. The higher traffic volumes and longer vehicle queues for Variant B are shown below. Therefore, the assessment of impacts is more conservative if Variant A is selected as the preferred development plan. This difference would likely be greatest at the West Burma Road Rail Crossing, which serves West Gateway traffic.

As shown in Figure 2-7, two existing at-grade railroad crossings on Maritime Street south of Burma Road would be removed as a part of the 2012 Project. The removal would reduce potential transportation hazard on this corridor for all roadway users.

The two existing at-grade crossings on Maritime Street immediately south of 7th Street would remain. Due to the crossings' close proximity to the Maritime Street and 7th Street intersection, northbound vehicles may queue onto the tracks from the signalized intersection. However, the project is projected to increase the northbound traffic on this segment by only two (2) vehicles in the AM peak hour;

while reducing the traffic by 131 trips in the PM peak hour. At this location the project would not cause a substantial transportation hazard.

Relocated Wake Avenue Rail Crossing. The project would relocate the existing Wake Avenue access to the EBMUD MWWTP further to the west at a location that would position the at-grade rail tracks approximately 500 feet from the West Grand Avenue intersection. The crossing would be controlled by gates across Wake Avenue. Three types of trains are expected to cross Wake Avenue at the EBMUD driveway:

- 3,200-foot trains for the Working Waterfront Variant (12 times per day for Variant A; 4 times per day for Variant B)
- 200-foot trains serving Central Gateway Port Logistics (4 times per day)
- 200-foot trains serving EBMUD (2 times per day)

Trains operating at the Relocated Wake Avenue Rail Crossing would temporarily block access to the EBMUD MWWTP. The effects of train blockages on queuing at the relocated Wake Avenue rail crossing are shown in Table 3.16-12. Trains are expected to average 7.5 mph at the crossing, resulting in a total blockage time of 5 minutes 51 seconds for vehicles traveling northbound on Wake Avenue. Peak hour traffic volumes on northbound Wake Avenue are not expected to exceed 150 vehicles per hour[168] after construction of the 2012 Project, resulting in an average peak hour vehicle queue of approximately 175 feet. So, it is highly unlikely that queues from the crossing would extend 500 feet to West Grand Avenue. The 95th percentile queue for southbound Wake Avenue at West Grand Avenue is not expected to exceed 150 feet in length. It is highly unlikely that queues at West Grand Avenue would extend to the rail tracks.

Southbound traffic volumes from the EBMUD MWWTP are not expected to exceed 90 vehicles per hour,[169] resulting in an average peak hour vehicle queue of approximately 100 feet if two southbound lanes are provided. If only one lane is provided the queue would be approximately 200 feet.

Table 3.16-12: Wake Avenue Queues During Train Blockages

Train Speed (mph)[1]	Gate Operating Time (sec.)[2]	Train Passage Time (sec.)[3]	Gate Down Time (sec.)	Motor Vehicles Arriving per Hour[4]	Vehicles Arriving During Gate Down Time	Storage Lanes	Queue Length (Feet)[5]
Northbound Wake Avenue							
5	60	436	496	147	20	2	250
7.5	60	291	351	147	14	2	175
10	60	218	278	147	11	2	138
Southbound EBMUD Driveway							
5	60	436	496	87	12	2	150
7.5	60	291	351	87	8	2	100
10	60	218	278	87	7	2	88

Table notes on next page.

[168] The maximum traffic volume for northbound traffic is based on forecasts of future traffic on Wake Avenue just north of West Grand Avenue with the 2012 Project in place.

[169] The maximum traffic volume for southbound traffic is from the Draft Environmental Impact Report: Main Wastewater Treatment Plant Land Use Master Plan (Feb. 2011).

[1] The minimum expected train speed is 5 mph; the maximum is 10 mph; the average is 7.5 mph.
[2] The gate would be lowered 30 seconds prior to train arrival and be raised 30 seconds after train departure.
[3] Based on a train length of 3,200 feet.
[4] Maximum peak hour traffic volume for 2012, 2020, and 2035 conditions with the project in place.
[5] Queue length assumes 25 feet of storage per vehicle.

Source: Kittelson & Associates, 2012.

The alignment of Engineers Road, a private road within the EBMUD Main Wastewater Treatment Plant, immediately adjacent to and parallel to the rail tracks would intersect the EBMUD driveway immediately north of the rail tracks. The close proximity of the Engineers Road & EBMUD driveway intersection to the rail tracks would result in vehicles on Engineer Road being positioned parallel to the rail tracks limiting the line of sight for viewing oncoming trains. The limited sight distance may result in a potentially substantial hazard for vehicles on Engineers Road. This would be a potentially significant impact. Implementation of Mitigation Measure 3.16-16(a) would reduce the impact to a less-than-significant level.

Existing Wake Avenue Rail Crossing. The project would close the existing Wake Avenue access to the EBMUD MWWTP as part of the relocation of the access to the west. If relocation is not possible, the existing Wake Avenue access would remain open in its current location and gates would be added at the existing crossing. Train operations are expected to be the same as described above for the Relocated Wake Avenue Rail Crossing.

Wake Avenue currently has only one lane in each direction. The queues on the existing two-lane Wake Avenue would be twice as long as those estimated in Table 3.16-12. However, the distance from West Grand Avenue to the existing Wake Avenue rail crossing is approximately 1,000 feet, providing more than double the space required to accommodate the estimated average peak hour vehicle queue.

West Burma Road Rail Crossing. Two new rail crossings that would be controlled by gates are proposed across West Burma Road in the Central Gateway approximately 1,100 feet west of Maritime Street. These rail crossings would carry the same train traffic as identified for the Wake Avenue crossing except for the trains serving EBMUD. Trains operating at the West Burma Road Rail Crossing would temporarily block access to the West Gateway, the Caltrans Maintenance Facility, and Gateway Park. The effects of train blockages on queuing at the West Burma Road rail crossing are shown in Table 3.16-13.[170]

Eastbound peak hour traffic volumes on West Burma Road approaching the crossings are not expected to exceed 246 vehicles per hour after construction of the 2012 Project, resulting in an average peak hour vehicle queue of approximately 600 feet. The eastbound peak hour queue on West Burma Road would block the pedestrian crosswalk located just west of the rail crossing. This would be a potentially significant impact. Implementation of Mitigation Measure 3.16-16(b) would reduce the impact to a less-than-significant level.

[170] The maximum traffic volumes are based on forecasts of future traffic with the 2012 Project in place and include consideration of the Caltrans Maintenance Facility and Gateway Park expansion projects.

Westbound peak hour traffic volumes on West Burma Road approaching the crossings are not expected to exceed 282 vehicles per hour after construction of the 2012 Project, resulting in an average peak hour vehicle queue of approximately 675 feet. The westbound queue would extend to the Truck Services driveway and the driveway to the CC3 Port Logistics building. The queuing may result in a substantial hazard for vehicles on West Burma Road, which would be a potentially significant impact. Implementation of Mitigation Measure 3.16-16(c) would reduce the impact to a less-than-significant level.

Table 3.16-13: West Burma Road Queues During Train Blockages

Train Speed (mph)[1]	Gate Operating Time (sec.)[2]	Train Passage Time (sec.)[3]	Gate Down Time (sec.)	Motor Vehicles Arriving per Hour[4]	Vehicles Arriving During Gate Down Time	Storage Lanes	Queue Length (Feet)[5]
Eastbound West Burma Road							
5	60	436	496	246	34	1	850
7.5	60	291	351	246	24	1	600
10	60	218	278	246	19	1	475
Westbound West Burma Road							
5	60	436	496	282	39	1	975
7.5	60	291	351	282	27	1	675
10	60	218	278	282	22	1	550

[1] The minimum expected train speed is 5 mph; the maximum is 10 mph; the average is 7.5 mph.
[2] The gate would be lowered 30 seconds prior to train arrival and be raised 30 seconds after train departure.
[3] Based on a train length of 3,200 feet.
[4] Maximum peak hour traffic volume for 2012, 2020, and 2035 conditions with the project in place.
[5] Queue length assumes 25 feet of storage per vehicle.

Source: Kittelson & Associates, 2012.

Rail crossings should be as close to 90 degrees from the motor vehicle crossing as possible. The westerly West Burma Road rail crossing appears to cross at an acute angle, which may be a substantial hazard for motorists and bicyclists and may result in a potentially significant impact. Implementation of Mitigation Measure 3.16-16(d) would reduce the impact to a less-than-significant level.

East Burma Road Rail Crossing. A new rail crossing that would be controlled by gates is proposed across East Burma Road in the Central Gateway approximately 1,100 feet east of Maritime Street. This rail crossing would carry 200-foot trains serving Central Gateway Port Logistics that would cross 4 times per day. Trains operating at the East Burma Road Rail Crossing would temporarily block access to truck parking area in the East Gateway, would temporarily block access to and egress from the proposed CN2 Recycler site, and would temporarily block egress from the 2012 Project railyard. The effects of train blockages on queuing at the West Burma Road rail crossing are shown in Table 3.16-14.[171]

Eastbound peak hour traffic volumes on East Burma Road approaching the crossing is not expected to exceed 224 vehicles per hour after construction of the 2012 Project, resulting in an average peak hour

[171] The maximum traffic volumes for East Burma Road are based on future traffic volumes just east of Maritime Street with the 2012 Project in place.

vehicle queue of approximately 125 feet. The eastbound peak hour queue on East Burma Road would not block any driveway and would not be a significant impact.

Table 3.16-14: East Burma Road Queues During Train Blockages

Train Speed (mph)[1]	Gate Operating Time (sec.)[2]	Train Passage Time (sec.)[3]	Gate Down Time (sec.)	Motor Vehicles Arriving per Hour[4]	Vehicles Arriving During Gate Down Time	Storage Lanes	Queue Length (Feet)[5]
Eastbound East Burma Road							
5	60	27	87	224	5	1	125
7.5	60	18	78	224	5	1	125
10	60	14	74	224	5	1	125
Westbound West Burma Road							
5	60	27	87	380	9	1	225
7.5	60	18	78	380	8	1	200
10	60	14	74	380	8	1	200

[1] The minimum expected train speed is 5 mph; the maximum is 10 mph; the average is 7.5 mph.
[2] The gate would be lowered 30 seconds prior to train arrival and be raised 30 seconds after train departure.
[3] Based on a train length of 200 feet.
[4] Maximum peak hour traffic volume for 2012, 2020, and 2035 conditions with the project in place.
[5] Queue length assumes 25 feet of storage per vehicle.

Source: Kittelson & Associates, 2012.

Westbound peak hour traffic volumes on East Burma Road approaching the crossing is not expected to exceed 380 vehicles per hour after construction of the 2012 Project, resulting in an average peak hour vehicle queue of approximately 200 feet. The westbound queue would block the easterly driveway to Port Logistics Building CE1, but there is another, much more convenient driveway located southwest of the building. The westbound queue may also block access to the truck parking lot located nearby and may block the egress from the 2012 Project Railyard. This would not be a significant impact as the delays would be relatively short.

The East Burma Road rail crossing appears to cross at an acute angle, which may be a substantial hazard for motorists and bicyclists and may result in a significant impact. Implementation of Mitigation Measure 3.16-16(d) would reduce the impact to a less-than-significant level.

The impacts of the at-grade crossings on roadway users may also be contingent on site-specific design, which are undefined currently. Therefore, similar to Impact 4.3-3 in the 2002 EIR, the project impact is considered potentially significant.

Other Factors. Locomotives when shut down or stalled can be moved by another locomotive so if this was the case they could be moved as soon as another one shows up. Some scenarios of would happen with a stall are:

1. If one locomotive stalls out then the second one will carry the load to get across the crossings. The West Gateway's 50-car cuts will require two locomotives for every move.

2. If both locomotives fail there will be back up locomotives and the Manifest locomotives onsite to rescue train.
3. Union Pacific will be leaving their power onsite during unloading of unit trains and can be used for emergencies.
4. Both the Union Pacific and Burlington Northern Santa Fe railroads have locomotives at their Oakland locations which can come to the rescue if required.
5. Industrial Railways Company will have an onsite track mobile units which can come to the rescue.

When there is a stall, the locomotives and railcars do not lock wheels to prevent movement. The railway operator will work with EBMUD hazardous materials crews to find a window to move cars through the site. This practice is customary throughout the country.

Although not required to reduce any CEQA impacts, the following recommendations should be considered:

Recommended Improvements

- The Project Sponsor shall negotiate with EBMUD in good faith to reach an agreement which reasonably limits train movements from unreasonably parking, stopping and/or blocking access to EBMUD's main gate to the MWWTP. Specifically, the Master Developer shall coordinate the timing of its use of the tracks to a schedule that reduces, to the maximum extent feasible, any potential inconveniences to EBMUD's main gate to the MWWTP.
- The Project Sponsor shall make reasonable good faith efforts to explore the feasibility of, and if determined feasible, obtain/secure alternate emergency vehicle access to the MWWTP that would not be impacted by the 2012 Army Base rail traffic. The City shall coordinate its efforts with EBMUD.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.3-5, 4.3-6 and 4.3-7

2012 Mitigation: Implementation of 2002 EIR Mitigation Measures 4.3-5 and 4.3-7 and SCA TRANS-3 and supplemented by Mitigation Measure 3.15-15a and 3.16-16, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-16:

a. Redesign the Engineers Road to intersect the EBMUD driveway at least 100 feet north of the at-grade rail crossing or configure an internal circulation plan that prohibits turns from Engineers Road onto Wake Avenue.
b. Provide a high visibility crosswalk with pedestrian crossing signs at the pedestrian crossing just west of the rail crossing on West Burma Road.
c. Paint "KEEP CLEAR" on West Burma Road for westbound vehicles at the Truck Services driveway.

d. Unless approved otherwise by the California Public Utility Commission (CPUC), construct all rail crossings at a minimum street-crossing angle of 45 degrees consistent with Institute of Transportation Engineers recommendations, 90 degrees is preferred for cross-traffic safety.

Significance After Implementation: Less Than Significant (No New Impact)

n) Would the project fundamentally conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment?

The project proposed to install a Class 3 bike route on the north side of West Burma Road west of the proposed Engineers Road intersection. However, the City's Bicycle Master Plan recommends limiting signage-only Class 3 bicycle route to the Oakland Hills area where the use is primarily for recreational purpose. The Plan further states that a Class 2 "bicycle lane should be used where the outside lane (with parking prohibited) is 15' or more." While a 12-foot travel lane is proposed on each direction along this segment, the project also includes a five-foot shoulder on each side, which would provide sufficient space for a bicycle lane.

Between the Engineers Road intersection and Maritime Street, at least a 10-foot wide Class 1 bicycle path would be installed on the north side of West Burma Road. This path would be connected not only to the bicycle route described above, it would also be connected to a planned bicycle path to be installed by Caltrans along I-80 freeway that would provide bicycle linkage to Emeryville and beyond. A 10-foot wide Class 1 bicycle path is also proposed on the east side of Maritime Street between West Grand Avenue and 7th Street. Both these bicycle paths are included in the Bicycle Master Plan and are consistent with the guidance of the Plan.

The City's Pedestrian Master Plan provides sidewalk guidelines by street types and requires a utility zone on all streets to accommodate public infrastructure such as lampposts, street trees, signs and furniture. The Plan defines Maritime Street as a District route, where a 10-foot sidewalk is recommended including a 6-foot through passage zone and a 4-foot utility zone. However, Maritime Street is heavily used high-speed truck route, where a greater width of sidewalk would provide more protection for pedestrians, so a 10-foot trail has been proposed for the east side of Maritime Street, separated from the roadway by a 4-foot utility zone. As shown in Figure 2-8, the project proposed a 9-foot pedestrian area on the west side of Maritime Street that includes a 5-foot through passage zone and a 4-foot utility zone. A 5-foot sidewalk is proposed on the south side of West Burma Road and on the north side of East Burma Road. Since Burma Road is not explicitly defined in the Pedestrian Master Plan, it is assumed to be a local/neighborhood route where a 5-foot through passage zone is recommended. However, the utility zone needs to be relocated between the passage zone and the roadway, as required in the Pedestrian Master Plan.

Because the final site plans for the project area have not been developed, other elements of the project may conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Therefore, similar to Impact 4.3-5 of the 2002 EIR, the project impact is potentially significant.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.3-4 and 4.3-9

2012 Mitigation: 2002 EIR Mitigation Measure 4.3-9 and Mitigation Measures 3.16-5 through 3.16-15a and 3.16-15b

Significance After Implementation: Less Than Significant (No New Impact)

o) Would the project result in a substantial, though temporary, adverse effect on the circulation system during construction of the project?

Construction and/or remediation would generate haul, delivery and employee trips, which would involve large transport trucks and movement of hazardous materials or hazardous waste through city streets. Furthermore, the construction of the proposed 7th Street grade separation and related improvements would require closure of 7th Street during construction, which would result in the need to divert traffic onto other roadways.

As partial implementation of the City's Transportation SCA TRANS-2, an analysis was conducted to determine the impacts of closing 7th Street during construction (Technical Memorandum – DRAFT: 7th Street Grade Separation Traffic Analysis for Detour, from Cigdem Mulazimoglu, Jacobs, to Chuck Joseph, Jacobs, October 7, 2011; see Appendix K). The Jacobs report indicates that anticipated improvements would maintain existing traffic service levels at:

- Adeline Street/5th Street
- Adeline Street/3rd Street

The study and the improvements identified in the study are partial implementation of SCA TRANS-2, which will require further development of a detailed traffic management plan and consultation and coordination with other public agencies.

Construction activities could result in traffic disruptions and potential level of service degradation on area roadways. The project would be constructed over a multi-year period and in a number of construction phases, the timing, amount and route of truck and vehicle movements are not currently known. Therefore, the degree of the construction impacts for the project cannot be determined. This is considered a potentially significant impact, as identified in Impact 4.3-11 of the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.3-13

2012 Mitigation: 2002 EIR Mitigation Measure 4.3-13 as supplemented by SCA TRANS-2

Significance After Implementation: Less Than Significant (No New Impact)

p) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Given the nature of the development, the 2012 Project would not result in a change to air traffic patterns.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

3.16.6 CUMULATIVE IMPACTS

Future conditions were evaluated to determine the extent to which impacts would result from the Project in combination with past, present and other reasonably foreseeable future projects. Reasonably foreseeable projects included general growth anticipated in the Bay Area as reflected in the land use data sets for future years in the Alameda Countywide Travel Model. Potential cumulative transportation impacts were assessed for the Year 2020 and Year 2035 conditions. Cumulative traffic volumes for the AM and PM peak hours were developed using procedures described under Travel Forecasting Methodology in Section 3.16.5.2. Specifically included and considered were Caltrans Maintenance Facility, Gateway Park, and East Bay Municipal Utility District's Main Wastewater Treatment Plant.

The conditions in which the Traffic Safety Thresholds and Other Thresholds are evaluated are the same in the future years as they are under existing conditions. Therefore, the project's cumulative impacts related to these thresholds are projected to be similar to those described under Project Impacts in Section 3.16.5.5; thus they are not repeated in this section.

3.16.6.1 Year 2020 Cumulative Conditions

Intersection turning movement volumes for Year 2020 Cumulative No Project and plus Project conditions are presented in Appendix B-2. Intersection levels of Service are shown in Table 3.16-15. Freeway segment volumes and levels of services are presented in Table 3.16-16. In the following discussion, the cumulative impacts of the 2012 Project in Year 2020 are compared against the impacts of the project proposed in the 2002 EIR for 2025.[172]

[172] The 2002 EIR assessed the potential cumulative impacts only under Year 2025 background conditions while the 2012 Project study evaluates the potential cumulative impacts under Year 2020 and Year 2035 conditions. Therefore, both Year 2020 and Year 2035 cumulative analysis are compared against 2002 EIR's Year 2025 analysis.

Table 3.16-15: Intersection Level of Service – Year 2020 Cumulative Conditions

Number	Intersection	2002 EIR 2025 + Redevelopment				Year 2020 Cumulative No Project				Year 2020 + 2012 Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]
1	W. Grand Avenue & Maritime Street	**F**	**254.6**	**F**	**253.2**	B	17.7	C	22.7	D	46.6	D	44.4
2	W. Grand Avenue & I-880 Frontage Road	**F**	**87.4**	**F**	**160.1**	D	48.2	C	29.7	**F**	**88.3**	D	47.4
3	W. Grand Avenue & Mandela Parkway[b]	B	15.2	B	18.8	A	6.2	A	7.8	A	7.1	A	8.7
4	W. Grand Avenue & Adeline Street	B	15.2	B	15.7	D	39.8	F	197.6	D	37.7	F	186.4[ef]
5	W. Grand Avenue & Market Street	B	10.7	B	11.2	C	21.8	C	22.5	C	22.8	C	20.4
6	W. Grand Avenue & San Pablo Avenue	B	13.6	B	13.7	B	17.4	B	18.5	B	17.3	B	18.6
7	W. Grand Avenue & MLK Jr. Way[c]	B	13.5	B	16.9	B	13.2	B	14.1	B	13.1	B	14.0
8	W. Grand Avenue & Northgate Avenue[c]	C	24.7	C	24.2	C	23.6	B	19.7	C	23.6	C	22.5
9	W. Grand Avenue & Harrison Street[c]	C	29.0	C	28.7	D	36.5	D	42.2	D	36.5	D	42.4
10	7th Street & Middle Harbor Road	**F**	**188.5**	**F**	**112.3**	C	23.1	D	36.3	C	21.2	C	21.9
11	7th Street & I-880 SB On-Ramp	A	4.3	B	10.9	A	2.2	A	3.9	A	2.3	A	5.3
12	7th Street & I-880 NB Off-Ramp	**F**	**82.5**	D	40.0	C	22.7	C	24.5	D	52.7	**F**	**103.4**
13	7th Street & Peralta Street	B	12.1	A	7.9	A	8.9	A	10.0	A	8.9	A	10.0
14	7th Street & Mandela Parkway	B	15.8	B	15.9	C	24.8	C	21.4	C	24.7	C	20.5
15	7th Street & Union Street	A	7.8	B	16.1	B	19.1	B	18.7	B	19.2	B	19.4
16	7th Street & Adeline Street	B	11.7	B	12.5	A	10.0	A	9.9	B	10.1	A	10.0
17	7th Street & Market Street	D	40.1	C	28.3	B	17.9	B	15.2	B	17.6	B	15.4
18	7th Street & Harrison Street[c]	B	14.2	C	20.7	C	31.7	F	169.8	C	32.0	F	171.6[f]
19	7th Street & Jackson Street[c]	D	39.2	C	25.3	B	10.8	A	8.3	B	10.8	A	8.2
20	6th Street & Jackson Street[c]	B	10.5	B	11.7	D	37.3	E	77.1	D	53.7	E	77.0
21	5th Street & Union/ I-880 N. Ramps	C	32.0	C	30.4	D	36.7	D	41.5	D	39.3	D	53.9
22	5th Street & Adeline Street	D	53.8	C	34.7	C	26.3	C	24.2	D	54.6	C	27.0
23	I-880 Off-Ramp & Market Street	C	22.0	C	20.4	B	12.8	B	14.6	B	12.5	B	14.9
24	5th Street & Broadway[c]	C	28.5	E	55.7	D	37.1	E	70.5	D	39.0	E	72.8
25	3rd Street & Adeline Street	**E**	**42.2**	C	22.1	B	11.2	B	13.3	C	16.2	C	17.3
26	3rd Street & Market Street	E	46.1	**F**	**207.3**	A	4.8	A	4.4	A	5.5	A	4.9
27	14th Street & Mandela Parkway[b]	A	9.1	A	8.4	B	12.3	B	12.3	B	12.3	C	25.1
28	12th Street & Brush Street[c]	**F**	**87.6**	C	25.4	D	48.7	B	19.9	D	54.7	C	20.3
29	12th Street & Castro Street[c]	B	16.2	C	21.7	C	27.6	F	102.3	C	27.5	**F**	**104.5**
30	27th Street & SR24/580 SB Off-Ramp	B	15.1	B	16.5	B	12.9	B	13.8	B	12.8	B	13.8
31	27th Street & SR24/580 NB On-Ramp	B	12.9	C	25.3	B	19.7	C	34.8	B	19.8	D	35.4
32	Adeline Street & San Pablo Avenue	D	41.4	D	50.6	B	14.1	B	17.3	B	14.2	B	18.0
33	MacArthur Blvd. & Market Street	B	16.6	C	21.2	B	17.4	C	21.7	B	17.4	C	21.8
34	Powell Street & I-80 Frontage Road	C	21.8	C	22.4	B	15.6	C	24.8	B	15.7	C	26.2
35	Powell Street & I-80 NB Ramps	C	28.5	**E**	75.3	B	14.6	B	18.1	B	14.9	B	19.3
36	Powell Street & Christie Avenue	C	32.9	D	35.8	C	28.3	D	47.0	C	28.9	D	48.9
37	Powell Street & Hollis Street	C	26.8	E	66.7	C	26.2	D	40.9	C	26.4	D	42.7
38	Powell Street/Stanford & San Pablo Avenue	D	38.6	D	46.8	D	49.1	D	42.6	D	53.3	D	44.8
39	Stanford Avenue & Market Street	C	30.8	C	33.4	C	24.1	C	29.3	C	24.5	C	29.9

Table 3.16-15 *Continued*

Number	Intersection	2002 EIR 2025 + Redevelopment				Year 2020 Cumulative No Project				Year 2020 + 2012 Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]
40	Stanford Avenue & MLK Jr. Way	B	18.1	F	97.8	C	32.8	F	84.8	C	32.9	F	82.6
41	7th Street & Ashby Avenue	D	36.6	D	53.1	C	34.2	D	39.7	C	34.6	D	41.1
42	San Pablo Avenue & Ashby Avenue	D	36.8	E	63.0	D	49.6	E	66.5	D	54.1	**E**	**74.3**
43	Marina Village & Constitution Way	D	47.0	C	29.6	B	14.0	B	14.5	B	14.1	B	14.5
44	Atlantic Avenue & Webster Street	**F**	**86.6**	D	46.7	C	32.9	C	26.3	C	32.9	C	26.3
45	Atlantic Avenue & Constitution Way	D	50.6	D	40.4	B	14.2	B	13.8	B	14.3	B	13.8
46	Maritime Street & Burma Road[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	C	30.6	D	36.8
47	Maritime Street & 14th Street[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	7.8	B	17.6
48	Navy Roadway & 7th Street Alt. 1[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	18.1	C	23.3
48	Navy Roadway & 7th Street Alt. 2[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	7.7	A	10.0
49	Burma Road & W. Truck Services[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	8.6	A	7.6

[a] Delay in seconds per vehicle.
[b] Weighted average of two intersections operating with one controller.
[c] Defined as a downtown intersection.
[d] Locations to be constructed or reconstructed as a part of 2012 project.
[e] Delays would be improved by addition of project traffic to non-critical movements.
[f] Volume-to-capacity ratio increase by less than 0.03 where LOS is F without the project and delays exceed 120 seconds; therefore, not a significant impact.

Shading denotes potential significant impacts which are further discussed in Section 3.16.6.1.

Bold denotes significant impacts identified in the 2002 EIR.

Source: Kittelson & Associates, 2012.

Table 3.16-16: Freeway Segment Level of Service – Year 2020 Cumulative Plus Project Conditions

	2002 EIR 2025 + Project				2020				2020 Plus Project Conditions					2020		Project Traffic		Potentially Significant?	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			Traffic Volume		(in PCEs)			
Freeway Segment	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**Lanes**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
I-80 at the Bay Bridge																			
Eastbound	D	0.912	F	1.365	B	0.510	F	1.015	B	0.513	F	1.015	5	6119	12174	38	0		
Westbound	F	1.333	**F**	**1.274**	E	0.985	C	0.712	E	0.985	C	0.713	5	11825	8548	0	10		
I-80 between I-880 and I-580																			
Eastbound	C	0.646	**F**	**1.033**	B	0.332	C	0.682	B	0.332	C	0.682	5	3896	8017	0	0		
Westbound	**F**	**1.107**	D	0.892	D	0.696	C	0.500	D	0.723	C	0.522	5	8000	5748	318	258		
I-80 East of I-80/I-580 Split																			
Eastbound	E	0.989	**F**	**1.209**	C	0.561	E	0.992	C	0.570	F	1.011	5	6734	11901	103	233		Yes
Westbound	**F**	**1.119**	**F**	**1.016**	F	1.021	D	0.732	F	1.050	D	0.752	5	12001	8606	334	231		
I-880 Connector to I-80 East																			
Northbound	D	0.885	E	0.944	C	0.659	D	0.760	C	0.676	D	0.810	2	3096	3573	79	236		
Southbound	D	0.776	C	0.617	C	0.669	C	0.564	D	0.740	C	0.598	2	3213	2707	339	165		
I-880 Connector to I-80 West																			
Northbound	B	0.523	B	0.524	B	0.402	B	0.458	B	0.406	B	0.458	2	1888	2151	19	0		
Southbound	A	0.348	B	0.524	A	0.266	B	0.429	A	0.272	B	0.429	2	1251	2018	27	0		
I-880 North of 7th Street																			
Northbound	C	0.550	C	0.737	B	0.424	C	0.615	B	0.427	C	0.616	3	2987	4334	22	8		
Southbound	B	0.489	D	0.771	B	0.457	C	0.686	B	0.472	C	0.687	3	3223	4834	102	9		
I-880 South of 7th Street																			
Northbound	E	0.943	D	0.799	D	0.783	D	0.729	D	0.847	D	0.768	3	5288	4918	429	263		
Southbound	C	0.586	E	0.931	C	0.514	D	0.851	C	0.561	E	0.891	3	3546	5869	328	279		
I-880 North of I-980																			
Northbound	**F**	**1.116**	D	0.807	D	0.789	C	0.666	E	0.896	D	0.725	3	5443	4597	739	402		
Southbound	C	0.578	E	0.974	B	0.421	D	0.768	B	0.455	D	0.804	3	3034	5530	243	261		
I-880 South of I-980																			
Northbound	**F**	**1.276**	F	1.139	E	0.910	E	0.935	E	0.988	E	0.980	4	8193	8417	700	399		
Southbound	D	0.860	**F**	**1.079**	C	0.670	D	0.822	C	0.706	D	0.871	4	6300	7730	338	461		
I-880 North of I-238																			
Northbound	**F**	**1.260**	F	1.125	D	0.849	E	0.951	E	0.914	E	0.993	4	8152	9129	626	405		
Southbound	**F**	**1.177**	**F**	**1.386**	E	0.976	E	0.900	F	1.015	E	0.947	4	9177	8460	367	441	Yes	
I-880 South of I-238																			
Northbound	**F**	**1.117**	F	1.291	D	0.818	E	0.929	D	0.848	E	0.942	4	7688	8729	284	126		
Southbound	F	1.441	**F**	**1.252**	F	1.186	E	0.998	F	1.194	F	1.018	4	11148	9384	73	187		Yes
I-238																			
Eastbound	C	0.611	E	0.981	B	0.457	D	0.789	C	0.499	D	0.829	3	3154	5442	292	278		
Westbound	F	1.084	C	0.698	E	0.940	B	0.393	E	0.991	B	0.434	3	6624	2772	359	290		

Table 3.16-16 *Continued*

	2002 EIR 2025 + Project				2020				2020 Plus Project Conditions					2020		Project Traffic		Potentially Significant?	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			Traffic Volume		(in PCEs)			
Freeway Segment	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**Lanes**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
I-580 East of I-238																			
Eastbound	C	0.712	F	1.007	B	0.463	D	0.780	B	0.489	D	0.806	5	5443	9160	306	307		
Westbound	F	1.033	C	0.734	C	0.726	A	0.274	D	0.761	A	0.300	5	8712	3283	417	321		
I-580 West of I-238																			
Eastbound	E	0.963	**F**	**1.077**	C	0.605	C	0.662	C	0.607	C	0.667	4	5812	6356	15	44		
Westbound	D	0.883	D	0.917	C	0.578	C	0.648	C	0.581	C	0.651	4	5547	6217	26	30		
I-580 East of I-980/SH-24																			
Eastbound	C	0.605	**F**	**1.260**	D	0.723	E	0.899	D	0.726	E	0.909	4	6797	8450	23	96		
Westbound	**F**	**1.159**	D	0.795	D	0.771	C	0.718	D	0.781	C	0.722	4	7400	6889	96	44		
I-580 West of I-980/SH-24																			
Eastbound	C	0.758	**F**	**1.071**	D	0.729	E	0.998	D	0.734	F	1.009	5	8202	11227	55	129		Yes
Westbound	**F**	**1.023**	D	0.889	E	0.947	E	0.856	E	0.957	E	0.863	5	10657	9629	111	80		
I-980																			
Eastbound	B	0.421	D	0.881	B	0.318	C	0.641	B	0.318	C	0.641	4	2987	6028	0	1		
Westbound	D	0.871	B	0.426	C	0.645	B	0.313	C	0.652	B	0.313	4	6066	2944	58	0		
SH 24 East of I-580																			
Eastbound	C	0.562	**F**	**1.072**	A	0.294	D	0.800	A	0.295	D	0.808	4	2766	7517	8	80		
Westbound	**F**	**1.077**	C	0.614	D	0.801	B	0.370	D	0.813	B	0.371	4	7526	3479	119	5		

Note: PCEs are passenger car equivalents (1 truck = 2 passenger car equivalents).

Shading denotes potential significant impacts which are further discussed in Section 3.16.5.4.

Bold denotes significant impacts identified in the 2002 EIR.

Source: Kittelson & Associates, 2012; Freeway Capacity Source: 2000 Highway Capacity Manual.

a) At a study, signalized intersection which is located outside the Downtown area, would the project cause the level of service (LOS) to degrade to worse than LOS D (i.e., LOS E)?

West Grand Avenue & I-880 Frontage Road (#2). Implementation of the 2012 Project would cause the level of service at the study signalized intersection of West Grand Avenue & I-880 Frontage Road to degrade to LOS F during the AM peak hour under Year 2020 Cumulative conditions. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

In the 2002 EIR, impacts were also identified for this intersection for the AM and PM peak hours under Year 2025 Cumulative conditions. The 2002 EIR identified mitigation measures that would mitigate the impacts of the project to a less-than-significant level.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.3-2

2012 Mitigation: Implementation of Mitigation Measure 3.16-17, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-17:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2016. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

7th Street & I-880 Northbound Off-Ramp (#12). Implementation of the 2012 Project would cause the level of service at the study signalized intersection of 7th Street & I-880 Northbound Off-Ramp to degrade to LOS F during the PM peak hour under Year 2020 Cumulative conditions. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

In the 2002 EIR, impacts were also identified for this intersection for Year 2025 Cumulative conditions. The 2002 EIR identified mitigation measures that would mitigate the impacts of the project to a less-than-significant level.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 5.3-2

2012 Mitigation: Implementation of Mitigation Measure 3.16-1, would reduce the project impact to a less-than-significant level.

Significance After Implementation: Less Than Significant (No New Impact)

b) At a study, signalized intersection which is located within the Downtown area, would the project cause the LOS to degrade to worse than LOS E (i.e., LOS F)?

As shown in Table 3.16-15, the 2012 Project would not cause the LOS to degrade to worse than LOS E at a study signalized intersection located within the downtown area under Year 2020 Cumulative conditions. Therefore, the 2012 Project would not create a significant impact under Year 2020 Cumulative plus Project conditions and no mitigation measures are required.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

c) At a study, signalized intersection outside the Downtown area where the level of service is LOS E, would the project cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., LOS F)?

San Pablo Avenue & Ashby Avenue (#42). The intersection of San Pablo Avenue & Ashby Avenue would operate at LOS E without the 2012 Project during the PM peak hour under Year 2020 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than four (4) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-18, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-18:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall coordinate with the City of Berkeley and Caltrans, and shall fund, prepare, and install the approved plans and improvements.

Significance After Implementation: Less Than Significant (No New Impact)

d) At a study, signalized intersection for all areas where the level of service is LOS E, would the project cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., LOS F)?

As shown in the intersection LOS worksheets Appendix B-5, the 2012 Project would not cause an increase in the average delay for any of the critical movements of six (6) seconds or more for any intersections not evaluated under c), above, or degrade to worse than LOS E (i.e., LOS F) at a study signalized intersection for all areas where the level of service is LOS E. Therefore, the 2012 Project would not create a significant impact under Year 2020 Cumulative plus Project conditions and no mitigation measures are required.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

e) At a study, signalized intersection for all areas where the level of service is LOS F, would the project cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity ("V/C") ratio increases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable)?

12th Street & Castro Street (#29). The intersection of 12th Street & Castro Street would operate at LOS F without the 2012 Project during the PM peak hour under Year 2020 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to

increase by more than two (2) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-4, would reduce the project impact to a less-than-significant level.

Significance After Implementation: Less Than Significant (No New Impact)

f) At a study, unsignalized intersection would the project add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume traffic signal warrant?

The 2012 Project would not add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume traffic signal warrant at a study unsignalized intersection. Therefore, the 2012 Project would not create a significant impact under Year 2020 plus Project conditions and no mitigation measures are required.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

g) Would the project cause a roadway segment of the Congestion Management Program (CMP) to a) degrade to LOS F; or b) increase the V/C ratio by more than three percent for a roadway segment that would operate at LOS F without the project in Year 2020?

The 2002 EIR identified the following significant and unavoidable impacts for the 2025 Cumulative plus project conditions:

- I-80 from the Bay Bridge to east of I-80/I-580 split
  - I-80 at the Bay Bridge
  - I-80 between I-880 and I-580
  - I-80 East of I-80/I-580 Split
- I-880 from I-980 to the segment south of I-238
  - I-880 North of I-980
  - I-880 South of I-980

  - I-880 North of I-238
  - I-880 South of I-238
- I-580 from west of I-980/SR-24 to I-238
  - I-580 West of I-238
  - I-580 East of I-980/SR-24
  - I-580 West of I-980/SR-24
- SR-24 east of I-580

As shown in Table 3.16-8, only four segments that would experience potentially significant impacts as a result of the Project in Year 2020. These four segments include:

- I-80 East of I-80/I-580 Split
- I-880 North if I-238
- I-880 South of I-238
- I-580 West of I-980/SR-24

As all four segments were identified to be significant impacted under cumulative conditions in the 2002 EIR, the Project would not result in any new significant impact. Further, the 2012 Project would not substantially increase the severity of the impacts identified in the 2002 EIR because the 2012 Project would generate much fewer trips than the 2002 Project. However, while implementation of 2002 EIR Mitigation Measure 4.3-4 (superseded by SCA TRANS-1 for the 2012 Project) would reduce traffic demand on the freeway system, the residual impact would remain significant and unavoidable

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.3-4

2012 Mitigation: 2002 EIR Mitigation Measure 4.3-4 as supplemented by SCA TRANS-1

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

h) Would the project result in substantially increased travel times for AC Transit buses in Year 2020?

The 2012 Project is not being directly served by existing AC Transit routes. As shown in the intersection analysis discussed above, all potential project impacts at the study intersections would be fully mitigated with the proposed mitigation measures or would have reduced severity as compared to previously identified impacts. Therefore, the project would not substantially affect the operations on roadways used by AC Transit buses and would not result in substantially increased travel times for AC Transit buses. The project may result in increased ridership on AC Transit buses through West

Oakland BART station transit hub and other stops in West Oakland which may result in increased loading and unloading time at bus stops. However, the ridership increase is not projected to be substantial such that it would result in a significant travel time impact for AC Transit buses. Therefore, the 2012 Project would not result in a new significant impact. This is a new threshold not previously assessed in the 2002 EIR.

2002 Impact: Not Applicable

2012 Impact: Less Than Significant

2002 Mitigation: Not Applicable

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

3.16.6.2 Year 2035 Cumulative Conditions

Intersection turning movement volumes for Year 2035 Cumulative No Project and plus Project conditions are presented in Appendix B-2. Intersection levels of Service are shown in Table 3.16-17. Freeway segment volumes and levels of service are shown in Table 3.16-18. In the following discussion, the cumulative impacts of the 2012 Project in Year 2035 are compared against the impacts of the project proposed in the 2002 EIR for 2025.[173]

a) At a study, signalized intersection which is located outside the Downtown area, would the project cause the level of service (LOS) to degrade to worse than LOS D (i.e., LOS E)?

West Grand Avenue & Maritime Street (#1). Implementation of the 2012 Project would cause the level of service at the study signalized intersection of West Grand Avenue & Maritime Street to degrade to LOS E during both the AM and PM peak hours under Year 2035 Cumulative conditions. After implementation of the mitigation measure described below, the intersection would operate at LOS D during both the AM and PM peak hours.

In the 2002 EIR, impacts were also identified for this intersection for Year 2025 Cumulative conditions. The 2002 EIR identified mitigation measures that would mitigate the impacts of the project to a less-than-significant level in the AM peak hour but stated that the residual significant impacts would be significant and unavoidable during the PM peak hour.

[173] The 2002 EIR assessed the potential cumulative impacts only under Year 2025 background conditions while the 2012 Project study evaluates the potential cumulative impacts under Year 2020 and Year 2035 conditions. Therefore, both Year 2020 and Year 2035 cumulative analysis are compared against 2002 EIR's Year 2025 analysis.

Table 3.16-17: Intersection Level of Service – Year 2035 Cumulative Conditions

Number	Intersection	2002 EIR 2025 + Redevelopment				Year 2035 Cumulative No Project				Year 2035 + 2012 Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]
1	W. Grand Avenue & Maritime Street	**F**	**254.6**	**F**	**253.2**	C	21.6	C	24.7	**E**	**62.6**	**E**	**60.9**
2	W. Grand Avenue & I-880 Frontage Road	**F**	**87.4**	**F**	**160.1**	F	103.5	F	124.6	**F**	**168.0**	**F**	**171.9**
3	W. Grand Avenue & Mandela Parkway[b]	B	15.2	B	18.8	B	16.2	C	31.8	C	22.5	D	52.2
4	W. Grand Avenue & Adeline Street	B	15.2	B	15.7	C	29.2	F	168.4	C	31.2	**F**	**168.9**
5	W. Grand Avenue & Market Street	B	10.7	B	11.2	F	188.9	F	307.7	**F**	**196.3**	**F**	**348.0**
6	W. Grand Avenue & San Pablo Avenue	B	13.6	B	13.7	C	21.1	F	94.3	C	21.9	**F**	**113.6**
7	W. Grand Avenue & MLK Jr. Way[c]	B	13.5	B	16.9	B	12.8	B	16.5	B	13.2	B	17.2
8	W. Grand Avenue & Northgate Avenue[c]	C	24.7	C	24.2	E	74.3	D	37.9	**F**	**92.1**	D	41.9
9	W. Grand Avenue & Harrison Street[c]	C	29.0	C	28.7	D	39.1	F	101.3	D	39.2	**F**	**105.5**
10	7th Street & Middle Harbor Road	**F**	**188.5**	**F**	**112.3**	C	25.0	D	35.2	C	31.0	C	24.8
11	7th Street & I-880 SB On-Ramp	A	4.3	B	10.9	A	2.6	A	4.5	A	2.5	A	6.6
12	7th Street & I-880 NB Off-Ramp	**F**	**82.5**	D	40.0	C	22.4	C	32.1	D	54.5	**E**	**72.8**
13	7th Street & Peralta Street	B	12.1	A	7.9	A	7.8	B	10.5	A	8.0	B	11.1
14	7th Street & Mandela Parkway	B	15.8	B	15.9	C	25.0	C	22.3	C	26.4	C	22.9
15	7th Street & Union Street	A	7.8	B	16.1	D	46.8	C	21.4	**E**	**65.4**	C	23.6
16	7th Street & Adeline Street	B	11.7	B	12.5	A	10.0	B	11.2	B	13.5	B	12.3
17	7th Street & Market Street	D	40.1	C	28.3	B	17.1	B	18.4	B	20.0	C	26.4
18	7th Street & Harrison Street[c]	B	14.2	C	20.7	D	41.3	F	224.6	D	44.3	**F**	**227.5**
19	7th Street & Jackson Street[c]	D	39.2	C	25.3	B	10.6	A	8.5	B	10.2	A	8.6
20	6th Street & Jackson Street[c]	B	10.5	B	11.7	F	91.5	F	130.6	**F**	**114.0**	F	138.7 [e]
21	5th Street & Union/ I-880 N. Ramps	C	32.0	C	30.4	C	34.8	E	55.7	D	38.8	**E**	**66.9**
22	5th Street & Adeline Street	D	53.8	C	34.7	D	45.5	C	24.3	D	49.0	C	30.6
23	I-880 Off-Ramp & Market Street	C	22.0	C	20.4	B	11.8	B	14.4	B	11.9	B	15.1
24	5th Street & Broadway[c]	C	28.5	E	55.7	D	43.4	E	68.2	D	44.6	E	69.2
25	3rd Street & Adeline Street	**E**	**42.2**	C	22.1	B	11.4	B	13.8	B	14.1	C	18.0
26	3rd Street & Market Street	E	46.1	**F**	**207.3**	A	5.8	A	5.1	A	6.7	A	5.7
27	14th Street & Mandela Parkway[b]	A	9.1	A	8.4	B	12.9	B	13.0	B	13.0	B	13.0
28	12th Street & Brush Street[c]	**F**	**87.6**	C	25.4	F	81.3	C	31.6	**F**	**97.3**	C	34.4
29	12th Street & Castro Street[c]	B	16.2	C	21.7	D	39.9	F	145.5	D	40.9	**F**	**157.7**
30	27th Street & SR24/580 SB Off-Ramp	B	15.1	B	16.5	B	16.2	B	15.7	B	16.2	B	15.7
31	27th Street & SR24/580 NB On-Ramp	B	12.9	C	25.3	C	25.5	E	60.0	C	25.6	E	60.3
32	Adeline Street & San Pablo Avenue	D	41.4	D	50.6	D	38.2	D	47.8	D	41.2	D	50.8
33	MacArthur Blvd. & Market Street	B	16.6	C	21.2	E	60.8	F	139.1	**E**	**65.0**	F	138.6 [e]
34	Powell Street & I-80 Frontage Road	C	21.8	C	22.4	B	15.5	C	24.5	B	15.7	C	24.7
35	Powell Street & I-80 NB Ramps	C	28.5	**E**	**75.3**	B	16.0	C	33.9	B	16.6	D	38.5
36	Powell Street & Christie Avenue	C	32.9	D	35.8	C	32.6	E	75.6	C	33.6	E	74.9
37	Powell Street & Hollis Street	C	26.8	E	66.7	F	83.9	F	85.9	**F**	**86.7**	**F**	**88.4**
38	Powell Street/Stanford & San Pablo Avenue	D	38.6	D	46.8	F	150.1	F	101.5	**F**	**154.0**	F	100.5
39	Stanford Avenue & Market Street	C	30.8	C	33.4	C	31.1	D	38.3	C	31.2	D	38.7

Table 3.16-17 *Conotinued*

Number	Intersection	2002 EIR 2025 + Redevelopment				Year 2035 Cumulative No Project				Year 2035 + 2012 Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]	LOS	Delay[b]
40	Stanford Avenue & MLK Jr. Way	B	18.1	F	97.8	C	33.6	F	109.4	C	33.6	F	111.0
41	7th Street & Ashby Avenue	D	36.6	D	53.1	D	50.4	D	43.0	D	52.2	D	45.4
42	San Pablo Avenue & Ashby Avenue	D	36.8	E	63.0	F	169.1	F	168.5	F	176.7 [e]	F	174.2 [e]
43	Marina Village & Constitution Way	D	47.0	C	29.6	D	45.2	E	59.6	D	45.2	E	59.8
44	Atlantic Avenue & Webster Street	**F**	**86.6**	D	46.7	D	37.2	C	29.2	D	38.7	C	29.3
45	Atlantic Avenue & Constitution Way	D	50.6	D	40.4	B	14.5	D	44.0	B	14.5	D	45.3
46	Maritime Street & Burma Road[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	C	33.8	D	35.2
47	Maritime Street & 14th Street[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	10.6	B	15.0
48	Navy Roadway & 7th Street Alt. 1[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	C	24.1	D	35.1
48	Navy Roadway & 7th Street Alt. 2[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	8.9	B	13.5
49	Burma Road & W. Truck Services[d]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	8.0	A	7.3

[a] Delay in seconds per vehicle.
[b] Weighted average of two intersections operating with one controller.
[c] Defined as a downtown intersection.
[d] Locations to be constructed or reconstructed as a part of 2012 project.
[e] Volume-to-capacity ratio increase by less than 0.03 where LOS is F without the project and delays exceed 120 seconds; therefore, not a significant impact.

Shading denotes potential significant impacts which are further discussed in Section 3.16.6.1.

Bold denotes significant impacts identified in the 2002 EIR.

Source: Kittelson & Associates, 2012.

Table 3.16-18: Freeway Segment Level of Service – Year 2035 Cumulative Conditions

	2002 EIR 2025 + Project				Year 2035 Cumulative No Project				2035 + 2012 Project					Year 2035		Project Traffic			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			Traffic Volume (PCEs)		(in PCEs)		Potentially Significant?	
Freeway Segment	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**Lanes**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
I-80 at the Bay Bridge																			
Eastbound	D	0.912	F	1.365	C	0.598	F	1.112	C	0.611	F	1.117	5	7175	13349	158	55		
Westbound	F	1.333	**F**	**1.274**	F	1.082	D	0.812	F	1.085	D	0.819	5	12984	9739	40	87		
I-80 between I-880 and I-580																			
Eastbound	C	0.646	**F**	**1.033**	B	0.382	D	0.741	B	0.382	D	0.741	5	4484	8701	3	0		
Westbound	**F**	**1.107**	D	0.892	D	0.745	C	0.580	D	0.765	C	0.595	5	8572	6667	222	173		
I-80 East of I-80/I-580 Split																			
Eastbound	E	0.989	**F**	**1.209**	C	0.616	F	1.044	C	0.621	F	1.055	5	7386	12529	63	134		
Westbound	**F**	**1.119**	**F**	**1.016**	F	1.054	D	0.767	F	1.064	D	0.776	5	12381	9014	124	106		
I-880 Connector to I-80 East																			
Northbound	D	0.885	E	0.944	D	0.745	D	0.799	D	0.779	D	0.816	2	3499	3755	162	80		
Southbound	D	0.776	C	0.617	D	0.761	C	0.655	D	0.797	C	0.678	2	3653	3145	171	111		
I-880 Connector to I-80 West																			
Northbound	B	0.523	B	0.524	B	0.423	B	0.481	B	0.424	B	0.483	2	1987	2260	4	12		
Southbound	A	0.348	B	0.524	A	0.298	B	0.476	B	0.306	B	0.478	2	1401	2239	39	6		
I-880 North of 7th Street																			
Northbound	C	0.550	C	0.737	B	0.478	C	0.644	B	0.478	C	0.646	3	3368	4539	5	14		
Southbound	B	0.489	D	0.771	C	0.516	D	0.763	C	0.522	D	0.764	3	3638	5383	41	7		
I-880 South of 7th Street																			
Northbound	E	0.943	D	0.799	D	0.837	D	0.804	E	0.886	D	0.837	3	5653	5425	325	224		
Southbound	C	0.586	E	0.931	C	0.586	E	0.956	C	0.613	E	0.995	3	4042	6594	190	270		
I-880 North of I-980																			
Northbound	**F**	**1.116**	D	0.807	D	0.842	D	0.754	E	0.891	D	0.787	3	5809	5202	336	225		
Southbound	C	0.578	E	0.974	B	0.403	D	0.776	B	0.421	D	0.805	3	2903	5590	126	206		
I-880 South of I-980																			
Northbound	**F**	**1.276**	F	1.139	E	0.966	F	1.017	F	1.001	F	1.041	4	8695	9157	310	209	Yes	
Southbound	D	0.860	**F**	**1.079**	D	0.734	D	0.858	D	0.750	D	0.885	4	6897	8070	151	248		
I-880 North of I-238																			
Northbound	**F**	**1.260**	F	1.125	D	0.879	F	1.046	D	0.900	F	1.062	4	8437	10045	199	148		
Southbound	**F**	**1.177**	**F**	**1.386**	F	1.076	E	0.927	F	1.090	E	0.944	4	10118	8717	126	154		
I-880 South of I-238																			
Northbound	**F**	**1.117**	F	1.291	D	0.868	F	1.020	D	0.882	F	1.027	4	8163	9584	130	69		
Southbound	F	1.441	**F**	**1.252**	F	1.288	F	1.037	F	1.295	F	1.047	4	12110	9751	63	91		
I-238																			
Eastbound	C	0.611	E	0.981	C	0.516	D	0.835	C	0.524	D	0.844	3	3561	5764	57	60		
Westbound	F	1.084	C	0.698	E	0.941	B	0.411	E	0.952	B	0.422	3	6637	2895	72	80		

Table 3.16-18 *Continued*

	2002 EIR 2025 + Project				Year 2035 Cumulative No Project				2035 + 2012 Project					Year 2035		Project Traffic			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			Traffic Volume (PCEs)		(in PCEs)		Potentially Significant?	
Freeway Segment	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**Lanes**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
I-580 East of I-238																			
Eastbound	C	0.712	F	1.007	C	0.543	D	0.863	C	0.548	D	0.869	5	6376	10135	67	79		
Westbound	F	1.033	C	0.734	D	0.818	B	0.392	D	0.827	B	0.399	5	9820	4701	110	85		
I-580 West of I-238																			
Eastbound	E	0.963	**F**	**1.077**	C	0.713	C	0.716	C	0.715	C	0.719	4	6847	6877	17	28		
Westbound	D	0.883	D	0.917	C	0.615	D	0.743	C	0.620	D	0.745	4	5899	7135	53	12		
I-580 East of I-980/SH-24																			
Eastbound	C	0.605	**F**	**1.260**	D	0.844	E	0.900	D	0.847	E	0.910	4	7929	8462	36	97		
Westbound	**F**	**1.159**	D	0.795	D	0.781	D	0.782	D	0.791	D	0.788	4	7499	7508	95	56		
I-580 West of I-980/SH-24																			
Eastbound	C	0.758	**F**	**1.071**	D	0.787	F	1.020	D	0.795	F	1.035	5	8859	11472	85	173		
Westbound	**F**	**1.023**	D	0.889	E	0.985	E	0.920	E	0.996	E	0.929	5	11083	10352	120	102		
I-980																			
Eastbound	B	0.421	D	0.881	B	0.343	C	0.655	B	0.344	C	0.658	4	3221	6159	12	22		
Westbound	D	0.871	B	0.426	C	0.669	B	0.351	C	0.680	B	0.354	4	6287	3298	100	34		
SH 24 East of I-580																			
Eastbound	C	0.562	**F**	**1.072**	B	0.340	D	0.884	B	0.343	E	0.895	4	3193	8309	33	100		
Westbound	**F**	**1.077**	C	0.614	D	0.862	B	0.442	D	0.875	B	0.447	4	8102	4158	125	46		

Note: PCEs are passenger car equivalents (1 truck = 2 passenger car equivalents).

Shading denotes potential significant impacts which are further discussed in Section 3.16.5.4.

Bold denotes significant impacts identified in the 2002 EIR.

Source: Kittelson & Associates, 2012; Freeway Capacity Source: 2000 Highway Capacity Manual.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.3-1. After mitigation, the impact would remain significant and unavoidable.

2012 Mitigation: Implementation of Mitigation Measure 3.16-19, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-19:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2028. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

7th Street & I-880 Northbound Off-Ramp (#12). Implementation of the 2012 Project would cause the level of service at the study signalized intersection of 7th Street & I-880 Northbound Off-Ramp to degrade to LOS E during the PM peak hour under Year 2035 Cumulative conditions. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

In the 2002 EIR, impacts were also identified for this intersection for Year 2025 Cumulative conditions. The 2002 EIR identified mitigation measures that would mitigate the impacts of the project to a less-than-significant level.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 5.3-2

2012 Mitigation: Implementation of Mitigation Measure 3.16-1 would reduce the project impact to a less-than-significant level.

Significance After Implementation: Less Than Significant (No New Impact)

7th Street & Union Street (#15). Implementation of the 2012 Project would degrade intersection operations to LOS E at the study signalized intersection of 7th Street & Union Street during the AM peak hour under Year 2035 Cumulative conditions. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS A.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-20, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-20:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2032. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

b) At a study, signalized intersection which is located within the Downtown area, would the project cause the LOS to degrade to worse than LOS E (i.e., LOS F)?

West Grand Avenue & Northgate Avenue (#8). Implementation of the 2012 Project would degrade intersection operations to worse than LOS E (i.e., LOS F) at the study signalized intersection of West Grand Avenue & Northgate Avenue during the AM peak hour under Year 2035 Cumulative

conditions. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-21, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-21:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2030. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

c) At a study, signalized intersection outside the Downtown area where the level of service is LOS E, would the project cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., LOS F)?

5th Street & Union Street/I-880 North Ramps (#21). The intersection of 5th Street & Union Street/I-880 North Ramps would operate at LOS E without the 2012 Project during the PM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than four (4) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS C.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-22, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-22:

- Optimize signal timing (i.e., increase the traffic signal cycle length to 100 seconds and adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2022. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

MacArthur Boulevard & Market Street (#33). The intersection of MacArthur Boulevard & Market Street would operate at LOS E without the 2012 Project during the AM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than four (4) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS B.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-23, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-23:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

Significance After Implementation: Less Than Significant (No New Impact)

d) At a study, signalized intersection for all areas where the level of service is LOS E, would the project cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., LOS F);

As shown in the intersection LOS worksheets in Appendix B-5, the 2012 Project would not cause an increase in the average delay for any of the critical movements of six (6) seconds or more for any intersections not evaluated under c), above, or degrade to worse than LOS E (i.e., LOS F) at a study signalized intersection for all areas where the level of service is LOS E. Therefore, the 2012 Project would not create a significant impact under Year 2035 Cumulative plus Project conditions and no mitigation measures are required.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

e) At a study, signalized intersection for all areas where the level of service is LOS F, would the project cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity ("V/C") ratio increases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable)?

West Grand Avenue & I-880 Frontage Road (#2). Implementation of the 2012 Project would cause the level of service at the study signalized intersection of West Grand Avenue & I-880 Frontage Road

to degrade to LOS F during the AM peak hour under Year 2035 Cumulative conditions. After implementation of the mitigation measure described below, the intersection would operate at LOS F (84.6 seconds delay) during the AM peak hour and LOS F (124.6 seconds delay) during the PM peak hour. The residual impact during the AM peak hour would be less-than-significant; however, the impact during the PM peak hour would remain significant and unavoidable.

In the 2002 EIR, impacts were also identified for this intersection for Year 2025 Cumulative conditions. The 2002 EIR concluded that with the project in place for Year 2025 Cumulative condition, the intersection would operate at LOS F (87.4 seconds delay) during the AM peak hour and LOS F (160.1 seconds delay) during the PM peak hour (without mitigation). The 2002 EIR identified mitigation measures that would reduce the impacts of the project to a less-than-significant level. However, the 2006 Draft Supplemental Environmental Impact Report for The Oakland Army Base Auto Mall Project (Lamphier-Gregory) reported that the costs of the mitigation proposed in the 2002 EIR were so prohibitively high that the mitigation was not feasible and the impacts were considered significant and unavoidable. The SEIR for the Auto Mall Project found that the intersection would operate at LOS F (122.6 seconds delay) during the AM peak hour and LOS F (160.1 seconds delay) during the PM peak hour for the Auto Mall Project. Likewise, the December 2010 Housing Element EIR, the 2004 Wood Street (Central Station) EIR, and the 2003 Uptown EIR have all identified this intersection as significant and unavoidable.

2002 Impact: Potentially Significant

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.3-2 (Less Than Significant)

2006 SEIR Mitigation: 2006 SEIR Mitigation Measure MM Traf-7 (Significant and Unavoidable)

2012 Mitigation: Implementation of Mitigation Measure 3.16-24, provided below, would reduce the project impact to a less-than-significant level during the AM peak hour but the impact during the PM peak hour would remain significant and unavoidable.

Mitigation Measure 3.16-24:

- Optimize signal timing (i.e., increase the traffic signal cycle length and adjust the allocation of green time for each intersection approach) for the AM and PM peak hours.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2021. Investigation of the need for this

mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Significant and Unavoidable (No New Impact and the Project would not substantially increase the severity of the impact identified in the 2006 SEIR)

West Grand Avenue & Adeline Street (#4). The intersection of West Grand Avenue & Adeline Street would operate at LOS F without the 2012 Project during the PM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause an increase in average delay for some of the critical movements of four (4) seconds or more. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-25, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-25:

- Optimize signal timing (i.e., increase the traffic signal cycle length to 90 seconds and adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2032. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

West Grand Avenue & Market Street (#5). The intersection of West Grand Avenue & Market Street would operate at LOS F without the 2012 Project during both the AM and PM peak hours

under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause the volume-to-capacity ("V/C") ratio to grow in excess of three (3) percent. The V/C ratio is used to measure impacts for this situation because the delay values cannot be measured accurately. Delay values over 120 seconds tend to increase exponentially and are thus generally considered unreliable. The intersection would operate with a V/C ratio of 2.19 during the AM peak hour and 2.96 during the PM peak hour under Year 2035 Cumulative conditions. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate with a V/C ratio of 1.62 during the AM peak hour and 1.70 during the PM peak hour, which is lower than no-project conditions, where the intersection would operate with a V/C ratio of 2.06 during the AM peak hour and 2.79 during the PM peak hour.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-26, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-26:

- Provide split phasing for northbound and southbound movements.
- Optimize signal timing (i.e., increase the traffic signal cycle length to 120 seconds and adjust the allocation of green time for each intersection approach) for both the AM and PM peak hours.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2022. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

West Grand Avenue & San Pablo Avenue (#6). The intersection of West Grand Avenue & San Pablo Avenue would operate at LOS F without the 2012 Project during the PM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause an increase in average delay for some of the critical movements of four (4) seconds or more. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS D.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-27, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-27:

- Remove approximately seven (7) parking spaces on the south side of West Grand Avenue; add an eastbound through lane between San Pablo Avenue and Martin Luther King Jr. Way; and convert the eastbound right turn lane to a through-right combination lane.
- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2026. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

West Grand Avenue & Harrison Street (#9). The intersection of West Grand Avenue & Harrison Street would operate at LOS F without the 2012 Project during the PM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause an increase in average delay for some of the critical movements of four (4) seconds or more. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS E, which is below the significance threshold for a downtown intersection.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-28, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-28:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2025. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

7th Street & Harrison Street (#18). The intersection of 7th Street & Harrison Street would operate at LOS F without the 2012 Project during the PM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than two (2) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS E, which is below the significance threshold for a downtown intersection.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-29, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-29:

- Optimize signal timing (i.e., increase the traffic signal cycle length to 80 seconds and adjust the allocation of green time for each intersection approach) for the PM peak hour.

- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required at the time of Project construction. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

6th Street & Jackson Street (#20). The intersection of 6th Street & Jackson Street would operate at LOS F without the 2012 Project during the AM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than two (2) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS E, which is below the significance threshold for a downtown intersection.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-30, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-30:

- Optimize signal timing (i.e., increase the traffic signal cycle length to 80 seconds and adjust the allocation of green time for each intersection approach) for the AM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2025. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

12th Street & Brush Street (#28). The intersection of 12th Street & Brush Street would operate at LOS F without the 2012 Project during the AM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than two (2) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS E, which is below the significance threshold for a downtown intersection.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-31, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-31:

- Optimize signal timing (i.e., increase the traffic signal cycle length to 120 seconds and adjust the allocation of green time for each intersection approach) for the AM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2023. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

12th Street & Castro Street (#29). The intersection of 12th Street & Castro Street would operate at LOS F without the 2012 Project during the PM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than two (2) seconds. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS E, which is below the significance threshold for a downtown intersection.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-4, would reduce the project impact to a less-than-significant level.

Significance After Implementation: Less Than Significant (No New Impact)

Powell Street & Hollis Street (#37). The intersection of Powell Street & Hollis Street would operate at LOS F without the 2012 Project during both the AM and PM peak hours under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than two (2) seconds. The intersection would operate with 86.7 seconds delay during the AM peak hour and with 88.4 seconds delay during the PM peak hour under Year 2035 Cumulative conditions. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate at LOS D (44.7 seconds delay) during the AM peak hour and at LOS E (74.0 seconds delay) during the PM peak hour, which are lower delays than no-project conditions, where the intersection would operate with 83.9 seconds delay during the AM peak hour and with 85.9 seconds delay during the PM peak hour.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-32, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-32:

- Provide protected plus permitted traffic signal phasing for the northbound and Hollis Street movement similar to the existing protected plus permitted traffic signal phasing for the southbound and Hollis Street movement.
- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for both the AM and PM peak hours.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Emeryville's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this intersection may be required by Year 2028. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

Powell Street/Stanford Avenue & San Pablo Avenue (#38). The intersection of Powell Street/Stanford Avenue & San Pablo Avenue would operate at LOS F without the 2012 Project during the AM peak hour under Year 2035 Cumulative conditions and implementation of the 2012 Project would cause the total intersection average vehicle delay to increase by more than two (2) seconds. The intersection would operate with 154.0 seconds delay during the AM peak hour under Year 2035 Cumulative conditions. This is a new potentially significant impact not previously identified in the 2002 EIR. After implementation of the mitigation measure described below, the intersection would operate with 142.1 seconds of delay during the AM peak hour, which is lower than no-project conditions, where the intersection would operate with 150.1 seconds of delay.

2002 Impact: Less Than Significant

2012 Impact: Potentially Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: Implementation of Mitigation Measure 3.16-33, provided below, would reduce the project impact to a less-than-significant level.

Mitigation Measure 3.16-33:

- Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City's standards to City of Oakland's Transportation Engineering Division for review and approval.

The project sponsor shall fund, prepare, and install the approved plans and improvements. A straight line interpolation of total intersection delay between Existing plus Project and Year 2020 conditions indicates that mitigation at this

intersection may be required by Year 2021. Investigation of the need for this mitigation shall be studied at the time of construction and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Significance After Implementation: Less Than Significant (No New Impact)

f) At a study, unsignalized intersection would the project add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume traffic signal warrant?

The 2012 Project would not add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume traffic signal warrant at a study unsignalized intersection. Therefore, the 2012 Project would not create a significant impact under Year 2035 plus Project conditions and no mitigation measures are required.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

i) Would the project cause a roadway segment of the Congestion Management Program (CMP) to a) degrade to LOS F; or b) increase the V/C ratio by more than three percent for a roadway segment that would operate at LOS F without the project in Year 2035?

The 2002 EIR identified the following significant and unavoidable impacts for the 2025 Cumulative plus project conditions:

- I-80 from the Bay Bridge to east of I-80/I-580 split
  - I-80 at the Bay Bridge
  - I-80 between I-880 and I-580
  - I-80 East of I-80/I-580 Split
- I-880 from I-980 to the segment south of I-238
  - I-880 North of I-980
  - I-880 South of I-980
  - I-880 North of I-238
  - I-880 South of I-238

- I-580 from west of I-980/SR-24 to I-238
  - I-580 West of I-238
  - I-580 East of I-980/SH-24
  - I-580 West of I-980/SH-24
- SR-24 east of I-580

As shown in Table 3.16-8, only one segment would experience potentially significant impacts as a result of the Project in Year 2035. This segment is:

- I-880 South of I-980

As this segment was identified to result in significant and unavoidable under cumulative conditions in the 2002 EIR, the Project would not result in any new significant impact. Because the 2012 Project would generate fewer trips, the Project would also not substantially increase the severity of impacts identified in the 2002 EIR. While implementation of 2002 EIR Mitigation Measure 4.3-4 (superseded by SCA TRANS-1 for the 2012 Project) would reduce traffic demand on the freeway system, the residual impact would remain significant and unavoidable.

2002 Impact: Significant and Unavoidable

2012 Impact: Potentially Significant

2002 Mitigation: 2002 EIR Mitigation Measure 4.3-4

2012 Mitigation: 2002 EIR Mitigation Measure 4.3-4, as supplemented by SCA TRANS-1

Significance After Implementation: Significant and Unavoidable (No New Impact, and no substantial increase in severity of a previously identified significant impact)

j) Would the project result in substantially increased travel times for AC Transit buses in Year 2035?

The 2012 Project is not being directly served by existing AC Transit routes. As shown in the intersection analysis discussed above, all potential project impacts at the study intersections would be mitigated with the proposed mitigation measures. Therefore, the project would not substantially affect the operations on roadways used by AC Transit buses and would not result in substantially increased travel times for AC Transit buses. The project may result in increased ridership on AC Transit buses through West Oakland BART station transit hub and other stops in West Oakland which may result in increased loading and unloading time at bus stops. However, the ridership increase is not projected to be substantial such that it would result in a significant travel time impact for AC Transit buses. Therefore, the 2012 Project would not result in a new significant impact. This is a new threshold not previously assessed in the 2002 EIR.

2002 Impact: Not Applicable

2012 Impact: Less Than Significant

2002 Mitigation: Not Applicable

2012 Mitigation: No Mitigation Warranted

Significance After Implementation: Less Than Significant (No New Impact)

3.16.7 PLANNING RELATED NON-CEQA CONSIDERATIONS

This section discusses transportation topics that are not considerations under CEQA but are evaluated to inform decision makers and the public about these issues. These topics include transit ridership, queuing, parking, and traffic control devices. None of the recommended measures are legally required to be implemented.

3.16.7.1 Transit Ridership

The project site is not directly served by any transit services. A previous AC Transit route in the project area was eliminated due to lack of ridership and the nearest BART station in West Oakland is located between 0.9 miles and 3.2 miles away depending on where the trip originates in the project site. Therefore, it is not anticipated that the Project would generate high number of transit ridership. Furthermore, because of the reduced size, the 2012 Project would produce far fewer employees than the 2002 EIR project. Therefore, the Project would not substantially affect the operations of AC Transit or BART.

3.16.7.2 Queuing

A queue analysis was performed for study intersections located within one-half mile of the project site to assess the project's potential effort on 95th percentile queuing under Existing and Year 2020 Cumulative conditions. Queue summaries are provided in Table 3.16-19 and Table 3.16-20.

Under Existing plus Project conditions, the project would cause the 95th percentile queues to increase by 25 feet or more at all study intersections within one-half mile of the project site with the exception of the 7th Street and Peralta Street intersection (#13) and the 14th Street and Mandela Parkway intersection (#27). However, the project would result in exceedance of available storage capacity at only the following locations:

- Northbound left-turn at W. Grand Avenue & Maritime Street (#1) - PM peak hour
- Westbound left-turn at 7th Street & Maritime Street (#10) – AM & PM peak hours
- Eastbound left-turn at 7th Street & I-880 northbound off-ramp (#12) – PM peak hour

Table 3.16-19: Queue Summary (95th percentile) – Existing Conditions (in feet)

			Existing Conditions												Existing + 2012 Project											
	Intersection	**in feet**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
1	W. Grand Avenue & Maritime Street	Storage	440			925			250	450		85			440			925			250					
		AM	34	72	63	199	175		34	34	34	36	41		54	**104**	83	**#670**	188		**87**	**87**	**65**	42	43	
		PM	16	85	32	66	182		137	144	58	45	35		30	**113**	**74**	**223**	**220**		**#472**	**#458**	**91**	**80**	46	
2	W. Grand Avenue & I-880 Frontage Road	Storage	800	1030	310	275		321	585			462			800			275		321	585			462		
		AM	44	45		#127	122	37	#124	60		#159	51		#115	61		#123	**167**	37	**#187**	71		#161	**#138**	
		PM	110	98		#200	172	48	67	92		87	35		#122	**173**		#186	**208**	48	**121**	**#143**		68	**72**	
3	W. Grand Av & Mandela Pkwy	Storage		545									450													
		AM		65			103			61			64			73			123			61			**96**	
		PM		67			116			98			65			**95**			126			102			78	
10	7th Street & Middle Harbor Road	Storage	100	1500		100	1600	275	170								250	100			170					
		AM	118	68	26	103	74	59	42	76		113	44			**#442**	41	**#312**	**347**		**#152**				12	
		PM	247	88	23	66	34	53	14	191		#297	32			**#518**	27	**163**	**76**		**55**				12	
11	7th Street & I-880 SB On-Ramp	Storage																								
		AM		11		14										33		30								
		PM		23		24										**65**		44								
12	7th Street & I-880 NB Off-Ramp	Storage	180						1300	1300		175												175		
		AM	44	10			53		#241	130		83		32	**#131**	12			65		**#357**	**#269**		87		**#75**
		PM	#136	26			45		92	109		81		29	**#388**	40			54		**#269**	131		103		38
13	7th Street & Peralta Street	Storage									50												50			
		AM		58			17			66	10		58			61			18			66	10		60	
		PM		65			60			36	13		70			77			66			36	13		71	
14	7th Street & Mandela Parkway	Storage	130	850		175									130			175								
		AM	58	175		196	168			97		93	117		59	180		195	186			97		95	118	
		PM	#73	286		104	11			107		84	90		#72	**337**		105	11			107		83	90	
27	14th Street & Mandela Parkway	Storage			75			75									75			75						
		AM		40	8		29	12		44			55			40	8		29	12		43			56	
		PM		35	8		32	14		48			43			35	8		32	14		48			43	

Note: #95th percentile volume exceeds capacity, queue may be longer.

Shading denotes location where queue increases by 25 feet or more and may exceed available storage.

Bold denotes location where the project causes queue length to increase.

Source: Kittelson & Associates, 2012.

Table 3.16-20: Queue Summary (95th percentile) – Year 2020 Cumulative Conditions (in feet)

			Year 2020 Cumulative No Project Conditions												Year 2020 Cumulative + 2012 Project											
	Intersection		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1	W. Grand Avenue & Maritime Street	Storage	440			925			250	450		85			440			925			250					
		AM	43	92	80	#293	251		49	51	43	38	48		63	122	95	**#800**	258		**104**	**107**	**70**	44	48	
		PM	25	180	41	82	273		206	205	59	71	46		37	220	80	**#260**	308		**#582**	**#569**	**173**	**106**	55	
2	W. Grand Avenue & I-880 Frontage Road	Storage	800	1030	310	275		321	585			462			800			275		321	585			462		
		AM	48	47		#270	122	37	#266	#120		#161	#94		**#119**	64		#281	**170**	37	**#324**	**#147**		#161	**#234**	
		PM	114	146		#257	171	48	126	#225		92	82		#133	**#258**		#259	**208**	48	**#213**	**#346**		72	**#142**	
3	W. Grand Avenue & Mandela Parkway	Storage		545									450													
		AM		73			119			61			107			80			140			61			**143**	
		PM		114			117			102			94			**147**			126			118			113	
10	7th Street & Middle Harbor Road	Storage	100	1500		100	1600	275	170								250	100			170					
		AM	117	67	26	102	68	50	42	76		112	52			**#442**	41	**#312**	**352**		**#152**				#33	
		PM	248	96	22	66	37	52	19	191		277	32			**#556**	29	**171**	**89**		61				#35	
11	7th Street & I-880 SB On-Ramp	Storage																								
		AM		11		17										33		34								
		PM		26		31										**85**		55								
12	7th Street & I-880 NB Off-Ramp	Storage	180						1300	1300		175												175		
		AM	44	10			59		#297	162		#131		34	**#131**	12			72		**#417**	**#316**		#139		**#78**
		PM	#185	28			48		95	151		157		32	**#434**	41			56		**#275**	#173		**#182**		40
13	7th Street & Peralta Street	Storage									50												50			
		AM		63			26			67	10		58			65			26			67	10		60	
		PM		82			71			36	13		72			98			77			36	13		72	
14	7th Street & Mandela Parkway	Storage	130	850		175									130			175								
		AM	66	262		196	177			97		98	117		66	265		196	195			97		100	118	
		PM	#81	385		112	12			110		#92	91		#81	**447**		113	13			110		84	91	
27	14th Street & Mandela Parkway	Storage			75			75									75			75						
		AM		40	8		29	12		45			60			40	8		29	12		44			60	
		PM		35	8		32	14		51			47			35	8		32	14		52			47	

Note: #95th percentile volume exceeds capacity, queue may be longer.

Shading denotes location where queue increases by 25 feet or more and may exceed available storage.

Bold denotes location where the project causes queue length to increase.

Source: Kittelson & Associates, 2012.

The following improvements are recommended to accommodate the anticipated queues:

W. Grand Avenue & Maritime Street (#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 (#46).

7th Street & Maritime Street (#10). Extend the westbound left-turn storage length to 320 feet by removing a portion of the existing center median.

7th Street & I-880 northbound off-ramp (#12). Convert one of the existing eastbound through lane to an exclusive left-turn lane to provide two left-turn lanes, and one through lane.

Similar to Existing plus Project conditions, the Project would result in exceedance of available storage at the same three intersections:

- Northbound left-turn at W. Grand Avenue & Maritime Street (#1) - PM peak hour
- Westbound left-turn at 7th Street & Maritime Street (#10) – AM & PM peak hours
- Eastbound and southbound left-turn at 7th Street & I-880 northbound off-ramp (#12) – PM peak hour

The following improvements are recommended to accommodate the anticipated queues:

W. Grand Avenue & Maritime Street (#1). Widen Maritime Street to provide two northbound left-turn lanes at the intersection.

7th Street & Maritime Street (#10). Extend the westbound left-turn storage length to 320 feet by removing a portion of the existing center median.

7th Street & I-880 northbound off-ramp (#12). Convert one of the existing eastbound through lane to an exclusive left-turn lane to provide two left-turn lanes, and one through lane; and extend the southbound left-turn storage pocket to 250 feet by removing a portion of the existing center median.

3.16.7.3 Parking

The Project considers the parking needs of both trucks and passenger vehicles. As shown in Figure 2-5b, it would devote approximately 40.8 acres for both City and Port truck parking in four different areas on the project site. In addition, parking spaces would be provided throughout the parking site to accommodate employees and visitors as part of the City's standard development review process. Prior to the issuance of building permit, a parking plan detailing the locations and layouts of planned parking spaces, number and type of the spaces, space dimensions, lighting, and other necessary information shall be submitted for City review and approval.

3.16.7.4 Traffic Control Devices

None of the study stop-controlled intersections would meet peak hour signal warrant per guidelines of the California Manual of Uniformed Traffic Control Devices (MUTCD). The proposed traffic control

devices would be adequate to facilitate anticipated vehicular traffic and accommodate other roadway users. It is recommended that marked crosswalks and proper street lighting be provided at all signalized intersections on the project site in accordance to City standards.

3.16.8 CONCLUSIONS

Redevelopment of the Oakland Army Base would not result in significant new transportation impacts or a substantial increase in the severity of previously identified impacts compared to the 2002 EIR. The 2002 Project included substantial amount of research and development facilities and offices in the project site, which generate higher number of employee trips; while the 2012 Project proposed a higher amount of port supporting land uses that would complement existing and proposed adjacent uses in the project area.

As shown in Table 3.16-8, the 2012 Project would generate over 6,800 fewer daily trips than the 2002 Project including 1,400 fewer trips in the AM peak hour and 1,200 fewer trips in the PM peak hour. Thus, impacts would be substantially reduced or similar to those addressed in the 2002 EIR, and would continue to result in less-than-significant impacts and significant and unavoidable impacts after mitigation. Previously imposed mitigation measures from the 2002 EIR have been identified in this section and would be implemented as part of the 2012 Project, where appropriate. This section also identifies additional mitigation measures that would be necessary to reduce the project impacts.

3.16.9 REFERENCES

Alameda County Transportation Commission, 2011. *Congestion Management Program 2011*. December.

East Bay Municipal Utility District, 2011. *Draft Environmental Impact Report Main Wastewater Treatment Plan Land Use Master Plan.* February.

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

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Oakland, City of, 2004. *Wood Street Project Environmental Impact Report*. September 20.

Oakland, City of, 2007. *Bicycle Master Plan*. December.

Oakland, City of, 2007. *First Addendum to the Supplemental Environmental Impact Report for the Oakland Army Base Auto Mall Project*. December.

Oakland, City of, 2010. *City of Oakland General Plan – Housing Element Update 2007-2014 Draft Environmental Impact Report*.

Oakland, City of, 2012. *2012 Addendum to the Initial Study/Mitigated Negative Declaration and Environmental Assessment for the Combined Project Study Report/Project Report for* the *42nd Avenue/High Street Access Improvement Project*. January.

Transportation Research Board, 2000. *Highway Capacity Manual*.

3.17 UTILITIES AND SERVICE SYSTEMS

This section evaluates the potential utilities and service systems impacts of the 2012 Project. This analysis specifically considers whether the 2012 Project would result in new significant utilities and service systems impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. This section also discusses any pertinent new information or changes in circumstances that could result in new significant utilities and service systems impacts not identified in the 2002 EIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the 2002 EIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This section also identifies the applicable provisions of the City's Standard Conditions of Approval and whether or not new mitigation measures are required.

3.17.1 PRIOR ANALYSIS AND CONCLUSIONS

3.17.1.1 2002 EIR Impact Findings

The 2002 EIR concluded that the proposed project would have potentially significant impacts related to potable water, solid waste services, and local roadways, which could be reduced to less-than-significant levels:

> **Impact 4.9-8:** Redevelopment of the project site would increase potable water demand and result in a significant impact.
>
> **Impact 4.9-10:** Redevelopment of the project site would increase the quantity of solid waste and demand for solid waste services, resulting in a potentially significant impact.
>
> **Impact 4.9-12:** Both construction and remediation vehicles and increased operations vehicle activity on the project site would accelerate or advance deterioration of local roadways and the timing and extend of roadway maintenance and repair. This impact would have a significant impact on existing roadways.

The 2002 EIR concluded that the proposed project would have less-than-significant impacts on the stormwater facilities, wastewater conveyance, and energy demand:

> **Impact 4.9-7:** Redevelopment in the 16th/Wood sub-district would expand existing facilities, resulting in a less-than-significant impact. (Stormwater is discussed in Section 3.9, Hydrology and Water Quality.)
>
> **Impact 4.9-9:** Redevelopment of the project site would increase flows to the EBMUD transport and treatment system, resulting in a less-than-significant impact
>
> **Impact 4.9-11:** Redevelopment of the project site could increase demand for energy, resulting in a less-than-significant impact.

3.17.1.2 2002 EIR Mitigation Measures

For the significant impact related to potable water demand, the 2002 EIR identified the following mitigation measures to reduce impacts to a less-than-significant level:

Mitigation Measure 4.9-4: Individual actions with landscaping requirements of one or more acres shall plumb landscape areas for irrigation with recycled water.

Mitigation Measure 4.9-5: Individual buildings with gross floor area exceeding 10,000 square feet shall install dual plumbing for both potable and recycled water, unless determined to be infeasible by the approving agency (City or Port).

Mitigation Measure 4.9-6: Site design shall facilitate use of recycled water, and shall comply with requirements of CCR Title 22 regarding prohibition of site run-off to surface waters.

For the potentially significant impact related to solid waste quantity and demand for solid waste services, the 2002 EIR identified the following mitigation measures 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 in to 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.

Mitigation Measure 4.9-9: The City and Port shall require developers to submit a plan that demonstrates a good faith effort to divert at least 50 percent of operations phase solid waste from landfill disposal. *(Note: This mitigation measure is superseded by SCA UTL-2.)*

For the significant impact related to local roadways deterioration, the 2002 EIR identified the following mitigation measure to reduce impacts to a less-than-significant level:

Mitigation Measure 4.9-10: The Port and City of Oakland 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.

3.17.2 STANDARD CONDITIONS OF APPROVAL

Since publication of the 2002 EIR, the City of Oakland has adopted Standard Conditions of Approval (SCA) that are applicable to all development projects within the City regardless of a project's environmental determination, pursuant in part to *CEQA Guidelines* Section 15183. The City's SCA serve to avoid or substantially reduce potentially significant impacts. The City's SCA that would apply to the 2012 Project are listed below. If the City approves the 2012 Project, the SCA would be adopted as requirements of the 2012 Project to help ensure less-than-significant impacts. Generally, the SCA are more current, more detailed, and provide greater clarity regarding process and procedures than previously imposed mitigation measures; the SCA will not increase significant adverse effects, but rather will further reduce adverse impacts. The SCA would be incorporated and required as part of the 2012 Project and, therefore, are not listed as mitigation measures but will be included in the Standard

Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2012 Project. In cases of conflict or overlap between mitigation measures from the 2002 Redevelopment EIR and current City SCA, the more stringent requirements would apply.

SCA UTL-1a: Compliance with the Green Building Ordinance, OMC Chapter 18.02
Prior to issuance of a demolition, grading, or building permit

The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, OMC Chapter 18.02.

a) The following information shall be submitted to the Building Services Division for review and approval with the application for a building permit:
   i. Documentation showing compliance with Title 24 of the 2008 California Building Energy Efficiency Standards.
   ii. Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.
   iii. Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.
   iv. Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (b) below.
   v. Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.
   vi. Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit.
   vii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

b) The set of plans in subsection (a) shall demonstrate compliance with the following:
   i. CALGreen mandatory measures.
   ii. All pre-requisites per the LEED / GreenPoint Rated checklist approved during the review of the Planning and Zoning permit, or, if applicable, all the green building measures approved as part of the Unreasonable Hardship Exemption granted during the review of the Planning and Zoning permit.
   iii. Insert green building point level/certification requirement: (See Green Building Summary Table) per the appropriate checklist approved during the Planning entitlement process.
   iv. All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Planning and Zoning Division that shows the previously approved points that will be eliminated or substituted.
   v. The required green building point minimums in the appropriate credit categories.

During construction

The applicant shall comply with the applicable requirements CALGreen and the Green Building Ordinance, Chapter 18.02.

a) The following information shall be submitted to the Building Inspections Division of the Building Services Division for review and approval:

i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.
ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.
iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

After construction, as specified below

Within sixty (60) days of the final inspection of the building permit for the project, the Green Building Certifier shall submit the appropriate documentation to Build It Green/Green Building Certification Institute and attain the minimum certification/point level identified in subsection (a) above. Within one year of the final inspection of the building permit for the project, the applicant shall submit to the Planning and Zoning Division the Certificate from the organization listed above demonstrating certification and compliance with the minimum point/certification level noted above.

SCA UTL-1b: Compliance with the Green Building Ordinance, OMC Chapter 18.02, for Building and Landscape Projects Using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist

Prior to issuance of a building permit

The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, (OMC Chapter 18.02.) for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist.

a) The following information shall be submitted to the Building Services Division for review and approval with application for a Building permit:
   i. Documentation showing compliance with the 2008 Title 24, California Building Energy Efficiency Standards.
   ii. Completed copy of the green building checklist approved during the review of a Planning and Zoning permit.
   iii. Permit plans that show in general notes, detailed design drawings and specifications as necessary compliance with the items listed in subsection (b) below.
   iv. Other documentation to prove compliance.

b) The set of plans in subsection (a) shall demonstrate compliance with the following:
   i. CALGreen mandatory measures.
   ii. All applicable green building measures identified on the StopWaste.Org checklist approved during the review of a Planning and Zoning permit, or submittal of a Request for Revision Plan-check application that shows the previously approved points that will be eliminated or substituted.

During construction

The applicant shall comply with the applicable requirements of CALGreen and Green Building Ordinance, Chapter 18.02 for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist.

a) The following information shall be submitted to the Building Inspections Division for review and approval:
   i. Completed copy of the green building checklists approved during review of the Planning and Zoning permit and during the review of the Building permit.

ii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

SCA UTL-2: Waste Reduction and Recycling

The project applicant will submit a Construction & Demolition Waste Reduction and Recycling Plan (WRRP) and an 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, FAQs, and forms are available at www.oaklandpw.com/Page39.aspx 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.

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.

SCA UTL-4: Improvements in the Public Right-of-Way (General)
Approved prior to the issuance of a P-job or building permit

a) The project applicant shall submit Public Improvement Plans to Building Services Division for adjacent public rights-of-way (ROW) showing all proposed improvements and compliance with the conditions and/or mitigations and City requirements including but not limited to curbs, gutters, sewer laterals, storm drains, street trees, paving details, locations of transformers and other above ground utility structures, the design specifications and locations of facilities required by the East Bay Municipal Utility District (EBMUD), street lighting, on-street parking and accessibility improvements compliant with applicable standards and any other improvements or requirements for the project as provided for in this Approval. Encroachment permits shall be obtained as necessary for any applicable improvements- located within the public ROW.

b) Review and confirmation of the street trees by the City's Tree Services Division is required as part of this condition and/or mitigations.
c) The Planning and Zoning Division and the Public Works Agency will review and approve designs and specifications for the improvements. Improvements shall be completed prior to the issuance of the final building permit.
d) The Fire Services Division will review and approve fire crew and apparatus access, water supply availability and distribution to current codes and standards.

SCA UTL-5: Improvements in the Public Right-of Way (Specific)
Approved prior to the issuance of a grading or building permit

Final building and public improvement plans submitted to the Building Services Division shall include the following components: Examples include:

a) Install additional standard City of Oakland streetlights.
b) Remove and replace any existing driveway that will not be used for access to the property with new concrete sidewalk, curb and gutter.
c) Reconstruct drainage facility to current City standard.
d) Provide separation between sanitary sewer and water lines to comply with current City of Oakland and Alameda Health Department standards.
e) Construct wheelchair ramps that comply with Americans with Disability Act requirements and current City Standards.
f) Remove and replace deficient concrete sidewalk, curb and gutter within property frontage.
g) Provide adequate fire department access and water supply, including, but not limited to currently adopted fire codes and standards.

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.

SCA HYD-1: Stormwater Pollution Prevention Plan (SWPPP)
(Please refer to Section 3.9, Hydrology and Water Quality)

SCA HYD-2: Post-Construction Stormwater Management Plan
(Please refer to Section 3.9, Hydrology and Water Quality)

SCA HYD-3: Maintenance Agreement for Stormwater Treatment Measures
(Please refer to Section 3.9, Hydrology and Water Quality)

SCA HYD-4: Stormwater and Sewer
(Please refer to Section 3.9, Hydrology and Water Quality)

SCA TRANS-2: Construction Traffic and Parking
(Please refer to Section 3.15, Transportation and Traffic)

3.17.3 UPDATED REGULATORY SETTING

The following discussion reviews updated State and local regulations relevant to utilities for the 2012 Project. No federal regulations relevant to utilities have been updated.

3.17.3.1 State

3.17.3.1.1 California Urban Water Management Planning Act

As identified in the 2002 EIR, the California Urban Water Management Planning Act, Division 6, Part 2.6 of the California Water Code, requires that an understanding of urban water demands and efficient use of water are to be actively pursued by water suppliers. Section 10610.4 of the Act requires water suppliers to actively pursue efficient use of available water supplies, and Section 10620 establishes the requirement of every urban water supplier to prepare and adopt an urban water management plan (UWMP).

Since 2005, several bills have been adopted that modify the required content of an UWMP. The most significant changes relate to water for lower-income households, potential uses of recycled water, and water conservation.

3.17.3.1.2 2010 California Green Building Standards Code (CALGreen)

CALGreen is a statewide regulatory code for all residential, commercial, hospital, and school buildings, and includes both mandatory and voluntary components that can be adopted by local jurisdictions. CALGreen is intended to encourage more sustainable and environmentally-friendly building practices, require low-pollution emitting substances that cause harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment. The five CALGreen categories include: 1) Planning and Design; 2) Energy Efficiency; 3) Water Efficiency and Conservation; 4) Material Conservation and Resource Efficiency; and 5) Environmental Quality. CALGreen became mandatory on January 1, 2011, for new residential and commercial construction.

3.17.3.1.3 Water Conservation Act of 2009 (SB 7)

The Water Conservation Act of 2009 (Water Code Division 6, Part 2.55) provides the regulatory framework to support a statewide reduction in urban per capita water use of 20 percent by the year 2020. Each urban water supplier is required to determine its existing water use and 2020 target, and report this analysis in the water supplier's UWMP.

3.17.3.1.4 Porter-Cologne Water Quality Control Act

As identified in the 2002 EIR, the Porter-Cologne Water Quality Act provides the basis for water quality regulation in California, and establishes the authority of the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs). The Act also authorizes waste discharge requirements for municipal wastewater treatment facilities through the National Pollution Discharge Elimination System (NPDES) program. The RWQCB grants and administers NPDES permits under a provision of the Act, which established effluent limitations and water quality requirements for wastewater plant discharges. In 2000, the RWQCBs began to require new construction to include "post-construction controls" in project design, and in December 2010, projects within the jurisdiction of NPDES permittees, are required to implement additional post-construction stormwater management requirements for new development and redevelopment projects.

3.17.3.2 Local

3.17.3.2.1 City of Oakland Water Reuse Ordinance

As identified in the 2002 EIR, the City of Oakland adopted the Water Reuse Ordinance in January 2002, which applies to developments meeting all of the following criteria: 1) the site is located within an ordinance-designated Water Reuse Area; 2) the development requires land subdivision of five or more parcels; 3) new water hook-ups from the EBMUD are required; and 4) development includes common, or shred, areas that will be plumbed. The City's ordinance identified the entire OARB redevelopment area as located within a Water Reuse Area.

3.17.3.2.2 City of Oakland Sewer Lateral Ordinance

Ordinance No. 13080 was adopted July 19, 2011 that amends the Oakland Municipal Code and extends the East Bay Municipal Utility District's (EBMUD) Regional Private Sewer Lateral (PSL) Ordinance to apply to lower sewer laterals. EBMUD adopted the Regional PSL Ordinance in February 2010 and subsequently the City Council passed Ordinance No. 13025 C.M.S. in July 2010 adopting the EBMUD Regional PSL Ordinance. However, the ordinance covered only the upper portion of sewer laterals (that portion between the property line and the building). The United States Environmental Protection Agency (U.S. EPA) required Oakland to extend the EBMUD Regional PSL Ordinance to apply to lower laterals. Approval of Ordinance 13080 brought the City into compliance with the EPA mandate.

3.17.3.2.3 City of Oakland Zero Waste Strategic Plan

The City of Oakland adopted a Zero Waste Goal in March 2004, and developed the Zero Waste Strategic Plan in November 2006. The main strategies outlined in the plan include: 1) expand and improve local and regional recycling and composting; 2) develop and adopt new rules and incentives to reduce waste disposal; 3) preserve land for sustainable development and green industry infrastructure; 4) advocate for manufacturer responsibility for produce waste, ban problem materials; and 5) educate, promote, and advocate a Zero Waste Sustainability Agenda.

3.17.3.2.4 City of Oakland Construction and Demolition Debris Waste Reduction and Recycling Requirements

The City of Oakland's construction and demolition debris waste reduction and recycling requirements (Municipal Code Chapter 15.34) are intended to further the goals of AB 939 and require a project applicant to prepare and submit a Construction and Demolition Debris Waste Reduction and Recycling Plan (WRRP) to divert at least 50 percent of all construction and demolition debris generated by project construction from landfill disposal.

3.17.3.2.5 City of Oakland Sustainability Programs

The City of Oakland's sustainability programs are administered under the Oakland Sustainability Community Development Initiative, which was created in 1998 under Ordinance 74675 CMS. The City's sustainability programs range from the encouragement of green building practices to the replacement of heavy-duty diesel trucks. Oakland has funded a Phase I feasibility study and a Phase II implementation plan to become a community choice aggregator, which would allow the City to purchase electricity on behalf of its energy users. Potential benefits of becoming an aggregator include

increased use of renewable energy sources to meet Oakland's energy needs and a reduction in electricity costs.

3.17.3.2.6 City of Oakland Green Building Ordinance and Sustainable Green Building Requirements for Private Development

The City of Oakland adopted a Civic Green Building Ordinance in May 2005, requiring that City-owned and occupied buildings to meet specific green building standards set by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system. In October 2010, the City adopted mandatory green building standards for private development projects. The intent of the mandatory green building standards is to integrate environmentally sustainable strategies in building construction and landscapes in the City of Oakland.

3.17.3.2.7 Draft City of Oakland Energy and Climate Action Plan

The purpose of the Oakland Energy and Climate Action Plan (ECAP) of 2011 is to identify and prioritize actions the City of Oakland can take to reduce energy consumption and greenhouse gas (GHG) emissions associated with Oakland. The ECAP recommends GHG reduction actions and establishes a framework for coordinating implementation, as well as monitoring and reporting on progress.

The primary sources of Oakland's GHG emissions are transportation and land use, building energy use, and material consumption and waste. In July 2009, the Oakland City Council approved a preliminary GHG reduction target for the year 2020 of 36 percent below 2005 levels. The ECAP recommends over 150 actions to be implemented over a ten-year period that would enable the City of Oakland to achieve a 36 percent reduction in GHG. Implementation of renewable energy and energy efficiency measures include measures to reduce vehicle miles traveled annually by 20 percent, electricity consumption by 32 percent and natural gas consumption by 14 percent. These measures include the adoption of a green building ordinance for private development (which was completed in October 2010), the use of property-based financing for alternative energy systems, and advancing the use of transit. A Draft ECAP was adopted in 2011 for the purposes of performing CEQA review, which is currently underway.

3.17.3.2.8 City of Oakland General Plan Policies and Actions

According to the 2002 EIR, the Land Use and Transportation Element (LUTE) of the Oakland General Plan did not include specific goals or policies regarding utilities service systems relevant to the redevelopment program. The Open Space, Conservation and Recreation (OSCAR) Element of the Oakland General Plan was adopted in June 1996 and contains the following objectives and policies relevant to utilities for the 2012 Project.[174]

Policy Statements Related to Water Conservation

- Policy CO-4.1: Emphasize water conservation and recycling strategies in efforts to meet future demand.
- Policy CO-4.2: Require use of drought-tolerant plants to the greatest extend possible and encourage the use of irrigation systems which minimize water consumption.

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

- Policy CO-4.3: Promote the use of reclaimed wastewater for irrigating landscape medians, cemeteries, parks, golf courses, and other areas requiring large volumes of non-potable water.
- Policy CO-10.2: As determined necessary by the City, require individual property owners and developers in high hazard areas to reduce fire hazards on their properties through a range of preventative measures. Landscaping and site planning in these high hazard areas should minimize future wildfire hazards.

Policy Statements Related to Energy Efficiency

- Policy CO-13.1: Promote a reliable local energy network which meets future needs and long-term economic development objectives at the lowest practical cost.
- Policy CO-13.2: Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.
- Policy CO-13.3: Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.

3.17.4 EXISTING CONDITIONS

3.17.4.1 Water Supply

EBMUD, a publically owned utility, supplies water to parts of Alameda and Contra Costa counties, including the City of Oakland. EBMUD's water system supplies 1.3 million customers and spans a 332-square-mile service area. The City of Oakland comprises approximately 30 percent of EBMUD's customers.

Water Supply System. The EBMUD water supply system consists of a network of reservoirs, aqueducts, water treatment plants, pumping plants, and other distribution facilities that collects, transmits, treats, and distributes water from its primary water source, the Mokelumne River.[175]

Approximately 90 percent of the water used by EBMUD comes from the Mokelumne River watershed, located in the Sierra Nevada. EBMUD has water rights that allow for delivery of up to 325 million gallons per day (mgd) from the Mokelumne River, subject to the availability of Mokelumne River runoff and to water rights of other users, as well as downstream fishery flow requirements and other Mokelumne River water uses. EBMUD's secondary water supply source is local runoff from the East Bay area watersheds that is stored in the terminal reservoirs located within service area boundaries. The availability of water from local runoff is dependent on hydrologic conditions and terminal reservoir storage availability (EBMUD, 2011c).

Water Demand. In fiscal year 2010, EBMUD's system demand was on average 174 mgd.[176] By 2040, EBMUD projects that water demand will increase to approximately 312 mgd in its service area, although with successful completion of water recycling and conservation programs, this demand could be reduced to approximately 230 mgd.[177]

[175] EBMUD, 2011c. Water Resources Planning Division. *Urban Water Management Plan 2010*. June.

[176] Ibid.

[177] The planning level of demand (312 mgd) does not include the short-term reduction and rebound in demand caused by the multi-year drought (2007-2010) and the downturn in the economy. The planning level of demand is used to assess demands as dictated by community policies. The EBMUD's 2040 Demand Study projected, on average, less than a

In normal water years, EBMUD has sufficient water rights to meet demands through 2040; however, EBMUD's current water supply is insufficient to meet water demand during single- and multi-year droughts despite EBMUD's aggressive water conservation and recycled water programs.[178] During a single dry year, EBMUD would implement a Drought Management Program. EBMUD is currently updating its Water Conservation Master Plan (WCMP) to include existing and planned efforts in support of meeting long-term water conservation planning goals through the year 2040. The WCMP is designed to achieve cost-effective and sustained water savings while maintaining savings achieved from past EBMUD conservation efforts implemented since the 1970s. The established and future water conservation approach includes identified conservation measures, implementation strategies, and budgetary resources required to meet the need-for-water and drought management program goals to minimize customer rationing during a water shortage[179] EBMUD also approved the updated long-term Water Supply Management Program 2040 in October 2009, which serves to identify and recommend solutions to meet dry-year water needs through the year 2040. As of March 2012, the Water Supply Management Program 2040 is undergoing revisions.[180]

Water Supply Projects. To meet projected water needs and address deficient supply during severe droughts, EBMUD is working to identify supplemental water supplies and recycled water programs, in addition continuing implementation of water conservation measures.

EBMUD also has developed mitigation and adaptation strategies to deal with the changing climate and its effects on water resources. In 2008, EBMUD incorporated climate change into its strategic plan, and has developed and implemented a climate change monitoring and response plan to inform future water supply, water quality, and infrastructure planning.[181]

EBMUD and the Sacramento County Water Agency (SCWA), in association with the City of Sacramento and with the U.S. Bureau of Reclamation, partnered to build a regional water supply to provide water for East Bay customers during dry years and needed water for the Sacramento region by drawing water from the Sacramento River near the town of Freeport. Known as the Freeport Regional Water Project, the collaboration consists of water pumping and treatment facilities, and transmission pipes. The project has the ability to provide EBMUD with up to 100 mgd as a supplemental water supply only during dry years, augmenting its Mokelumne River water supply and its water conservation programs. Construction was completed in February 2011.[182]

Recycled Water. EBMUD's East Bayshore Recycled Water Project began recycled water deliveries to customers in 2008. The East Bayshore Recycled Water Project currently supplies recycled water for landscape irrigation in areas of Oakland and Emeryville where recycled water

one percent growth each year in customer demand through 2030 followed by a much lower increase thereafter to a 2040 planning level of demand of 230 mgd after applying reductions from conservation and recycled water savings.

[178] EBMUD, 2011c, op. cit.

[179] Ibid.

[180] EBMUD, 2012d. *Water Supply Management Program 2040*. Website: www.ebmud.com/our-water/water-supply/long-term-planning/water-supply-management-program-2040 (accessed February 2).

[181] EBMUD, 2012e. Water Supply: Project and Long-Term Planning. Website: www.ebmud.com/our-water/water-supply (accessed February 2).

[182] Ibid.

pipelines have been installed. EBMUD plans to expand the distribution system into Alameda, Albany and Berkeley. A recycled water transmission pipeline along 4.4 miles of the Eastshore Freeway is largely complete, and 2 miles of transmission pipeline have been installed in Oakland. Recycled water treatment facilities have been constructed at EBMUD's wastewater treatment plant, located north of the 2012 Project site. EBMUD stores the recycled water in a 1.5 million gallon storage tank on the site and uses another 2.4 million gallons a day (mgd) at the wastewater treatment plant for various industrial processes and for landscape irrigation.[183]

Water Distribution Facilities in Project Area. As identified in the 2002 EIR, EBMUD treats potable water for the entire project area. Within the project area, the Port and City own, and the Port operates and maintains, the water distribution system from two connections to the EBMUD system. EBMUD operates a 16-inch water line through 14th Street, and 12-inch to 16-inch water lines along Maritime and 7th Streets. EBMUD also operates an 8-inch water line along I-80 at the north end of the project site. A 12-inch water line owned by the City of San Francisco and serving Treasure Island, is located north of the project area in the I-80 right-of-way. This line provides a third connection to the project area, however, this connection is not utilized. Currently, the project area is not served with recycled water; however plans to serve the area with recycled water through the East Bayshore Recycled Water Project were identified in the 2002 EIR. Current water demand for the project site is estimated at approximately 144,341 gallons per day.

3.17.4.2 Wastewater

As identified in the 2002 EIR, generally, the City of Oakland provides citywide sanitary sewer collection services, and EBMUD provides sewage transport, treatment, and discharge services. The City's collection system connects with EBMUD's sewer interceptor system and transports sewage to the EBMUD wastewater treatment facility, which is located adjacent to the redevelopment program area, southwest of the Interstate 580/Interstate 80 (I-580/I-80) interchange and south of the San Francisco/ Oakland Bay Bridge.

Wastewater Collection System. The City of Oakland owns, operates, and maintains a local sanitary sewer system that covers approximately 48 square miles and includes approximately 1,000 miles of pipes and seven pump stations. The wastewater collection system is divided into basins and sub-basins. Each numbered sub-basin encompasses a specific physical area, and its sewer flows are assigned to a single discharge point from the City's collection system into EBMUD's interceptor lines. City sewer pipes range from 6 to 72 inches in diameter, with most pipelines pre-dating 1938 and with some parts of the system over 100 years old. Over 90 percent of the sewer customers are residential users.

The former OARB is served by a Port and City-owned sewer network where the Port operates and maintains the sewer network on behalf of the Port and City. The existing sewer system drains to an EBMUD pump station at 7th Street near Maritime Street, and north directly to the EBMUD wastewater treatment plant.

[183] EBMUD, 2011b. East Bayshore Recycled Water Project. December. Website: www.ebmud.com/ resource-center/publications/fact-sheets (accessed February 1, 2012).

Wastewater Treatment. EBMUD owns and operates a network of 15 wastewater pumping stations (with 1.5 to 60 mgd capacity), 29 miles of concrete interceptor sewers (one to nine feet in diameter), and 8 miles of force mains that convey wastewater to the EBMUD wastewater treatment plant. In 2010, EBMUD treated domestic, commercial and industrial wastewater for 650,000 customers in the East Bay, and the average flow into the plant was 70 mgd.[184] EBMUD provides secondary treatment for a maximum flow of 168 mgd, and primary treatment can be provided for up to 320 mgd. Storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd. Treated wastewater is disinfected, dechlorinated, and then discharged 1.2 miles off the East Bay shore through a deep water outfall (102-inch pipeline) into the San Francisco Bay. The EBMUD outfall pipeline begins at EBMUD's main wastewater treatment facility northeast of the 2012 Project site, traverses westerly immediately north of the Baldwin Yard, then immediate north of and parallel to Burma Road, and continues to its outfall point approximately one mile west of the eastern Bay shoreline. Currently, there are no planned improvements to the wastewater treatment plant that would affect treatment capacity.

Inflow/Infiltration. EBMUD's system is currently unable to handle storm drainage from the communities where sewer pipes leak heavily during rainstorms. The issue of inadequate wet weather capacity has been particularly critical since 2009, when the San Francisco Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's wet weather facilities. EBMUD is currently conducting extensive flow modeling and hydraulic monitoring to determine the level of flow reduction that will be needed to comply with the RWQCB order. In the meantime, EBMUD is instructing lead agencies in the process of reviewing development projects to require such projects to implement the following improvements: 1) replace or rehabilitate existing sanitary sewer collection systems, including lateral sewer lines, to reduce infiltration and inflow, and 2) ensure that any new wastewater collection systems, including lateral sewer lines, are constructed to prevent infiltration and inflow to the maximum extent feasible. In 2011, EBMUD began working with State, federal and local agencies to focus on wet weather flows at the source, where City and EBMUD pipes would be inspected, cleaned and monitored.[185]

Wastewater Collection and Treatment in Project Area. As identified in the 2002 EIR, EBMUD provides sanitary sewage transport, treatment and disposal services for the entire redevelopment program area. Within the OARB sub-district, the Army owns, and the Port operates and maintains the sewage collection system. There is also a single septic tank at Building No. 991.

According to the 2002 EIR, the redevelopment program area is located entirely within sewer collection basin 64 (Oakland North), and sewer flows are discharged to EBMUD's South Interceptor. An existing 15-inch sewer line connects directly to EBMUD. There are several existing sanitary sewer pump stations on and off the 2012 Project site along the existing path of the existing sanitary sewer line. During wet weather events, and in times when groundwater is at its highest level, groundwater inflow and infiltration to the sanitary sewer system can account for the majority of sewer flows. Groundwater in the Maritime and OARB sub-districts is normally relatively shallow.

[184] EBMUD, 2011a. All About EBMUD. Website: www.ebmud.com/resource-center/publications/fact-sheets (accessed February 1, 2012).

[185] Ibid.

3.17.4.3 Solid Waste

Waste Management and Disposal. Waste Management of Alameda County (WMAC) collects non-hazardous waste within the City of Oakland and provides curbside pick-up for residential, commercial, and industrial non-hazardous waste. Non-hazardous solid waste is taken to the Davis Street Resource and Recovery Complex in San Leandro for processing, and then hauled to the Altamont Landfill and Resource Facility near the City of Livermore. The Davis Street facility has a permitted maximum daily throughout of 5,600 tons.[186] Demolition and construction debris is generally hauled by construction contractors to recycling facilities or the Vasco Road Landfill. In 2009, the City of Oakland disposed of approximately 306,840 tons of solid waste at various disposal facilities. In 2006, the City's solid waste diversion rate was 56 percent.[187]

The Altamont Landfill facility has a total estimated capacity of 62 million cubic yards. As of 2000, the landfill's total estimated used capacity was approximately 16.3 million cubic yards, or 26 percent of the landfill's total capacity. The landfill has a permitted throughput of 11,500 tons per day[188] and is anticipated to have sufficient capacity until 2025, its expected closure date.[189]

The Vasco Road Landfill facility has a total estimated capacity of 33 million cubic yards. As of 2000, the landfill's total estimated used capacity was approximately 23 million cubic yards, or 70 percent of the landfill's total capacity. The landfill has a permitted throughput of 2,250 tons per day and is anticipated to have sufficient capacity until 2019, its expected closure date.[190]

As identified in the 2002 EIR, solid waste generated within the OARB redevelopment area is ultimately disposed at the Altamont Landfill facility.

3.17.4.4 Energy and Telecommunications

Electricity and Gas. The Pacific Gas & Electric Company (PG&E) provides electricity and natural gas service to the City of Oakland. PG&E charges connection and user fees for all new development, in addition to sliding rates for electrical and natural gas service based on use.

At the former OARB, the Army procured its own electrical service instead of directly receiving electrical service from PG&E. The Port has continued to operate the electrical system at the former OARB, acting as a separate electric utility service provider. Electrical power is supplied via a 115 kV distribution line to the Davis Substation and 7th and Maritime Streets, and from these locations, electricity is distributed throughout the former OARB.

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[186] CalRecycle, 2012a. *California Waste Stream Profiles: Transfer Station Profile for Davis Street Transfer Station/Resource Recovery Complex.* Website: www.calrecycle.ca.gov/profiles (accessed January 31).

[187] CalRecycle, 2012b. *California Waste Stream Profiles: Jurisdiction Profile for the City of Oakland.* Website: www.calrecycle.ca.gov/profiles (accessed January 31).

[188] Permitted throughput is the maximum permitted amount of waste a landfill can handle and dispose of in one day. This figure is established in the current solid waste facilities permit issued by CalRecycle.

[189] CalRecycle, 2012c. *California Waste Stream Profiles: Active Landfills Profile for Altamont Landfill & Resource Recovery Landfill*. Website: www.calrecycle.ca.gov/Profiles/ (accessed January 31).

[190] CalRecycle, 2012d. *California Waste Stream Profiles: Active Landfills Profile for Vasco Road Landfill.* Website: www.calrecycle.ca.gov/Profiles/ (accessed January 31).

Because many agencies in California 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 a increasing reliance on renewable resources, including small-scale sources such as photovoltaic panels and wind turbines, in addition to larger-scale facilities, such as wind farms.

As previously described, regulatory requirements for efficient use of electricity and gas are contained in Title 24, Part 6, of the California Code of Regulations, entitled "Energy Efficiency Standards for Residential and Nonresidential Buildings." These regulations specify the State's minimum energy efficiency standards and apply to new construction of both residential and nonresidential buildings. The standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. Compliance with these standards is verified and enforced through the local building permit process.

As identified in the 2002 EIR, PG&E distributes natural gas throughout the redevelopment program area. However within the OARB sub-district, PG&E distributes gas under "interruptible" terms, where delivery is subject to supply or capacity restrictions. PG&E supplies and distributes electricity to a portion of the 2012 Project site, notably street lighting along Maritime Street.

Telecommunications. AT&T (formerly Pacific Bell) provides telephone services within the redevelopment program area. The California Public Utilities Commission requires that AT&T anticipate and serve new growth. To meet this requirement, AT&T continually upgrades its facilities and infrastructure, adding new facilities and technology to remain in conformance with California Public Utilities Commission tariffs and regulations and to serve customer demand in the City. AT&T also works with the City to ensure that construction of new facilities does not interfere with any new or newly paved streets.

As identified in the 2002 EIR, AT&T operates and maintains the telecommunications system in the redevelopment program area, and owns most of the system outside the OARB sub-district. The Army owns the remainder of the telephone infrastructure equipment at the OARB. Within the OARB, AT&T has a primary point of interface in Building No. 780 and an intermediate distribution frame in Building No.1.

3.17.5 SIGNIFICANCE CRITERIA AND IMPACT ASSESSMENT

The 2012 Project would have a significant impact on the environment if it would:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;

g) Comply with federal, State, and local statutes and regulations related to solid waste;

h) Violate applicable federal, state and local statutes and regulations relating to energy standards; or

i) Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.

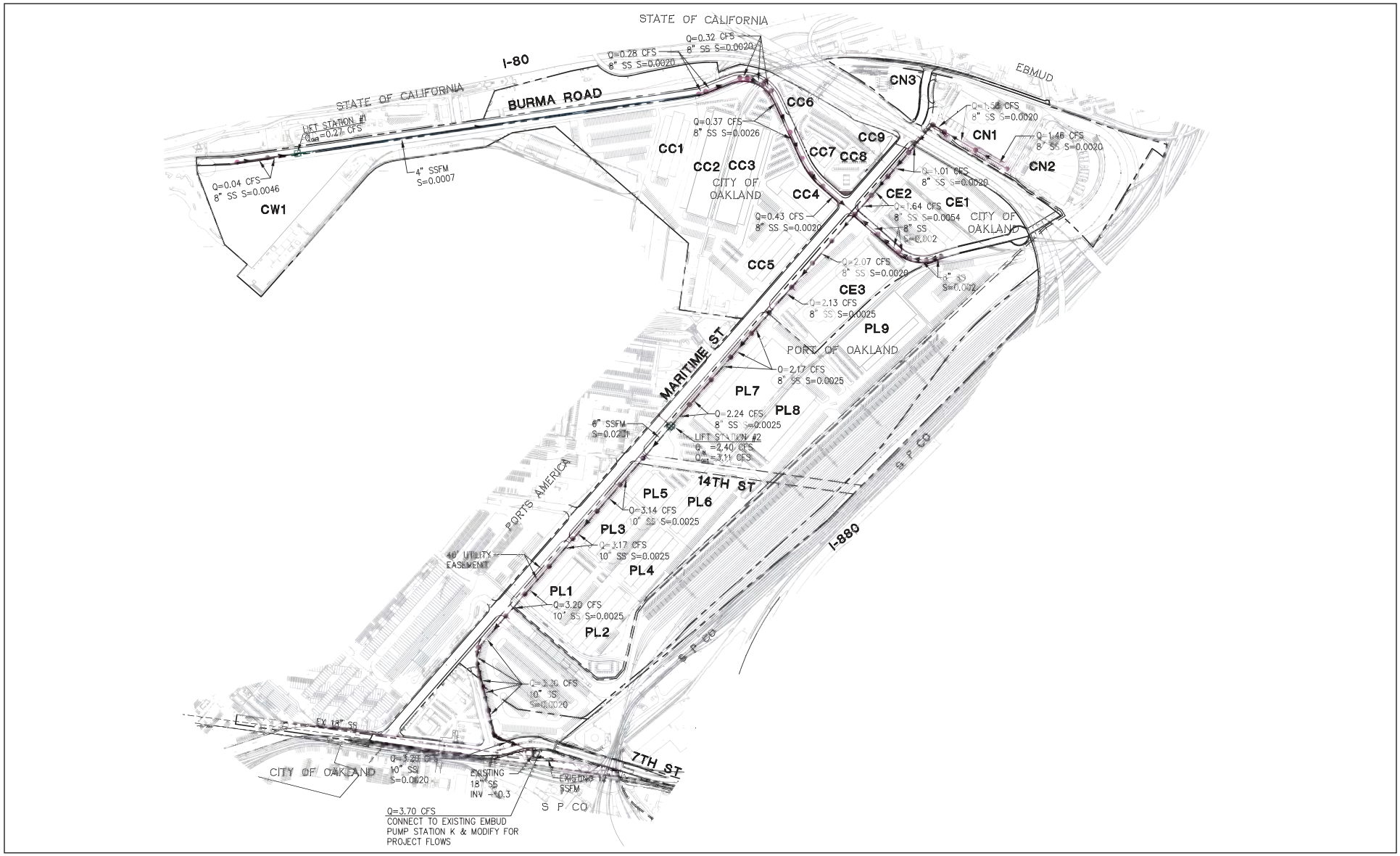
These criteria are discussed below.

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The 2012 Project would not exceed the wastewater treatment requirements of the San Francisco Bay RWQCB, as EBMUD sanitary sewage transport and its wastewater treatment plant would have adequate capacity to serve the 2012 Project, after implementation of Standard Conditions of Approval that require upgrades to the sanitary sewer system.

Because much of the existing infrastructure on the 2012 Project site is old, in disrepair and inadequate to serve the level and type of development proposed, the construction of a new wastewater collection system that meets current standards would be implemented as part of the 2012 Project. In addition, to the maximum feasible extent, old lateral lines in the former Oakland Army Base would be identified, then disconnected or abandoned in place to reduce inflow and infiltration. No new connections would be made to the existing 15-inch sanitary sewer line along 7th Street , however connections would be made to the existing EBMUD pump station located at 7th Street. As shown in Figure 3.17-1, the 2012 Project would be served by new 8-inch and 10-inch sanitary sewer lines from existing pump stations near the intersection of 7th Street and Maritime Street, 14th Street and Maritime Street, and the western-most area on West Burma Road. The 2012 Project also would be served by a new 4-inch force main along West Burma Road. Depending on the final routing of the new sanitary sewer main laterals, new pumps may be needed within the existing stations and/or additional stations may be required. Phased construction of the 2012 Project would drive the final determination of new pump locations. Sewage flows generated by the 2012 Project would be connected to and treated at the EBMUD wastewater treatment plant. The EBMUD wastewater treatment plant would have adequate dry weather capacity to treat wastewater flows from the 2012 Project.

As shown in Table 3.17-1, the 2012 Project would generate an average day flow of approximately 101,390 gallons of wastewater per day (gpd), and would have a maximum day flow of approximately 380,212 gpd. Peak wet weather flows would be approximately 904,619 gpd. The average day flow from the 2012 Project represents 0.1 percent of EBMUD's main wastewater treatment plant's average flow of 70 mgd.



LSA

FIGURE 3.17-1

N

0 600 1200

FEET

SANITARY SEWER LINE

SANITARY SEWER FORCE MAIN

EXISTING SANITARY SEWER LINE

SANITARY SEWER MANHOLE

SANITARY SEWER PUMP STATION

18" SS PIPE SIZE

2012 Oakland Army Base Project

Preliminary Sanitary Sewer Plan

SOURCE: RUGGERI-JENSEN-AZAR, 2012.

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In the 2002 EIR, wastewater flows estimated for the same geographic area as the proposed project, the OARB sub-district, was approximately 488,450 gpd for average day flow, and approximately 1.46 mgd for peak wet weather flow conditions.[191] Average day flow for wastewater generated under the proposed project would be approximately 387,060 gpd less than the estimated average day flow generated for the OARB sub-district under the 2002 EIR. The estimated peak wet weather flows under the proposed project would be approximately 555,381 gpd less than the estimated peak wet weather flow generated for the OARB sub-district under the 2002 EIR. Therefore, the estimated wastewater generated under the proposed project would be less than the estimated wastewater generation flows identified in the 2002 EIR.

Table 3.17-1: 2012 Oakland Army Base Estimated Wastewater Generation

Land Use	Total Square Feet or Number of Facilities	Average Day Wastewater Generation Rate	Average Day Flow Wastewater Generation (gpd)	Maximum Day Flow Wastewater Generation[a]
Research and Development[b]	90,000	200 gpd/1,000 sq. ft	18,000	67,500
Warehousing[c]	1,972,104	25 gpd/1,000 sq. ft	49,303	184,886
Recycling and Reprocessing Facilities[d]	2 facilities	28,000 gpd/facility (Recycling) 2,320 gpd/facilit (Reprocessing)	30,320	113,700
Truck Services[e]	37,673	100 gpd/1,000 sq. ft	3,767	14,126
Total	**2,445,477**		**101,390**	**308,212**

Note: gpd = gallons per day, sq. ft. = square feet

[a] Maximum day flow water demand = 3.75

[b] Sewage generation rate for research and development is taken from City of Oakland standards and assumed to be equal to "office".

[c] Sewage generation rate for warehousing is taken from City of Los Angeles standards, which were used by the City of Oakland as the basis for their standards.

[d] Sewage generation rate for reprocessing is assumed to be 80 percent of the water used. The water used is based on information provided by Custom Alloy Scrap Sales (CASS). CASS indicated that evaporation consumes a significant portion of the water and as a result, sewage generation is reduced. Sewage generation rate for recycling is data supplied by California Waste Solutions.

[e] Sewage generation rate for truck services is taken from City of Oakland standards and assumed to be equal to "automobile repair garage".

Source: Oakland Global and Ruggeri-Jensen-Azar, 2012.

Although EBMUD's main wastewater treatment plant has adequate dry weather capacity to treat wastewater generated by development projects within EBMUD's service area, inadequate capacity exists during wet weather events. As previously described, EBMUD is instructing lead agencies in the process of reviewing development projects to require such projects replace or rehabilitate existing sanitary sewer collection systems, and ensure that any new wastewater collection systems are constructed to prevent infiltration and inflow to the maximum extent feasible. These requirements are expected to reduce the impact of development projects on wastewater discharges and wastewater facilities to a less-than-significant level.

The 2012 Project also would be subject to SCA HYD-4, which would require the project applicant to confirm the capacity of the City's surrounding sanitary sewer system and state of repair, and to fund any necessary sewer infrastructure improvements, including mechanisms to control increases in

[191] The 2012 project boundary deviates from the OARB sub-district boundary primarily to accommodate infrastructure improvements including 7th and Maritime Streets and a proposed tug road over Maritime Street.

infiltration/inflow. Therefore, improvements necessary to ensure adequate capacity to accommodate wastewater generated by the 2012 Project would be required and funded as part of SCA HYD-4.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. Therefore, the 2012 Project would not result in any new or more impacts related to exceeding wastewater treatment requirements of the San Francisco Bay RWQCB than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA HYD-4 would further reduce impacts related to wastewater to less-than-significant levels.

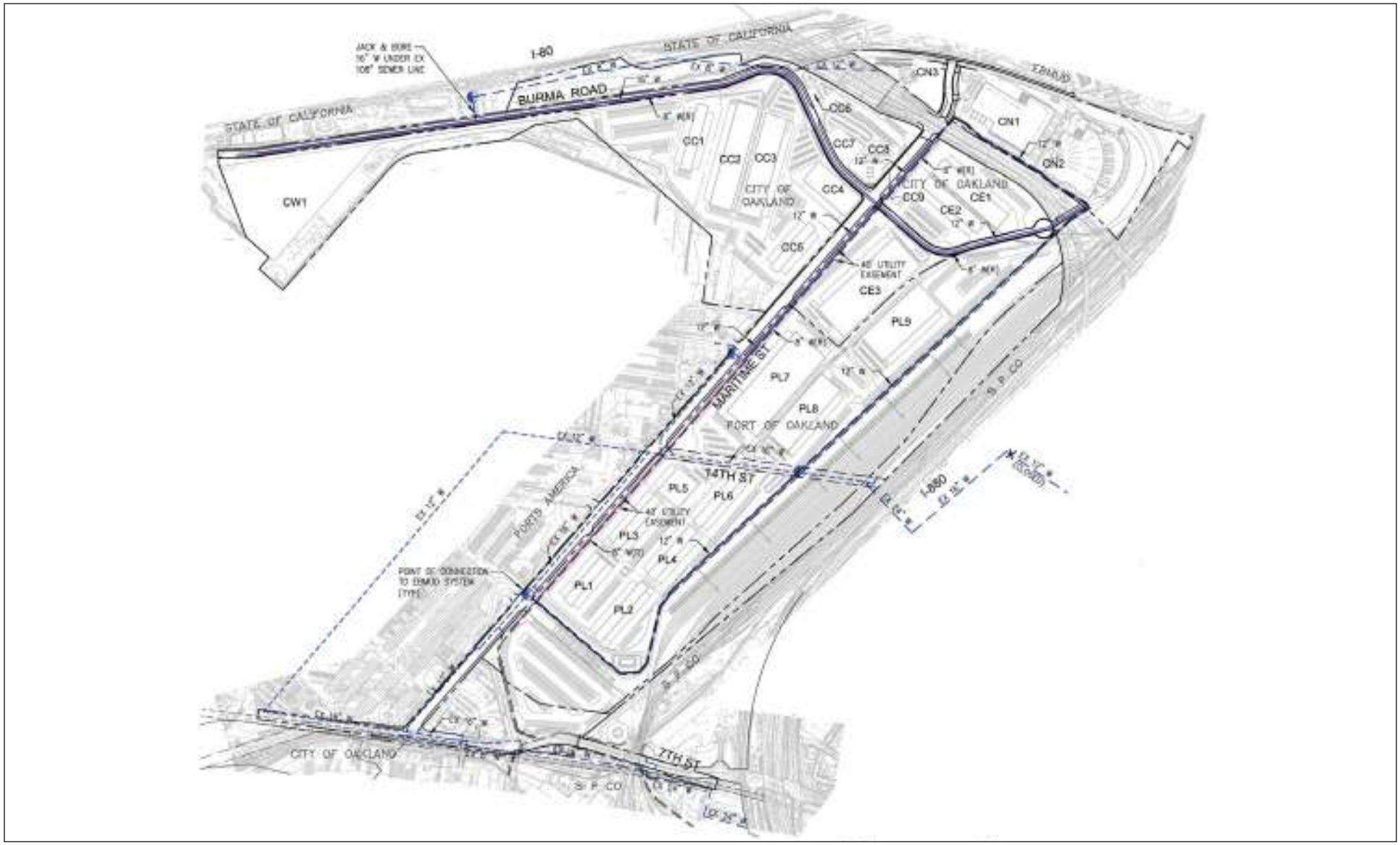
Significance After Implementation: Less Than Significant (No New Impact)

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The construction of a new wastewater collection system and a new water distribution system that meet current standards would be implemented as part of the 2012 Project since much of the existing infrastructure on the project site is old, in disrepair and inadequate to serve the level and type of development proposed. New water and wastewater lines would be connected to the appropriate EBMUD system on the 2012 Project site.

As previously described, the 2012 Project would be served by new 8-inch and 10-inch sanitary sewer lines from existing pump stations near the intersection of 7th Street and Maritime Street, 14th Street and Maritime Street, and the westernmost area on West Burma Road. The 2012 Project also would be served by a new 4-inch force main along West Burma Road. Sewage flows generated by the 2012 Project would be connected to and treated at the EBMUD wastewater treatment plant. Depending on the final routing of the new sanitary sewer main laterals, new pumps may be needed within the existing stations and/or additional stations may be required. Phased construction of the project would drive the final determination of new pump locations.

As shown in Figure 3.17-2, the 2012 Project would be served by new 12-inch water lines along the eastern portion of Maritime Street, the eastern portion of the project site along Tulagi Street, the northeastern portion of the project site along West Grand Avenue, and a 16-inch water main along West Burma Road. The 2012 Project also would be served by new 8-inch recycled water lines along Maritime Street and West Burma Road. Points of connections to the EBMUD system would be located at the intersection of Maritime and 8th Streets, Tulagi and 14th Streets, on Maritime Street north of 14th Street, and around the central portion of West Burma Road.



LSA

FIGURE 3.17-2

N

0 600 1200
FEET

EXISTING WATER (EBMUD)

12" Ø PIPE SIZE

POINT OF CONNECTION TO EBMUD SYSTEM

2012 Oakland Army Base Project
Preliminary Water Plan

SOURCE: RUGGERI-JENSEN-AZAR, 2012.

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Because construction activities associated with new or expanded water and wastewater facilities are located within construction areas already subject to widespread ground disturbance on the project site, the removal, installation, and replacement of existing water and wastewater facilities would not cause significant environmental effects that have not already been identified in the 2002 EIR and this Initial Study. In addition to SCA HYD-4 (Stormwater and Sewer), SCA UTL-3, UTL-5, and UTL-6 require: 1) water service facilities to be installed in accordance with standard specifications; 2) sanitary sewer and water lines to comply with current City of Oakland and Alameda Health Department standards; and 3) the project applicant to pay for and install public improvements made necessary by the 2012 Project, including damage caused by construction activity.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more impacts related to the construction of new water or wastewater treatment facilities, such that the construction could cause significant environmental effect, than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA UTL-3, SCA UTL-5, SCA UTL-6, and SCA HYD-4 would further reduce impacts related to the construction of new water and wastewater treatment facilities to less-than-significant levels.

Significance After Implementation: Less Than Significant (No New Impact)

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The 2012 Project includes the removal and replacement of existing storm drainage facilities. The new facilities would include 24-inch to 60-inch storm drain lines along Maritime Street, 14th Street, West Burma Road, the eastern portion of 7th Street, and along the easternmost portion of the project site. Portions of existing storm drainage facilities in the southwestern portion of the project site would remain as part of the 2012 Project. The stormwater from the Port lands (east of Maritime Street) would be channeled into new stormwater lines that would lead to one proposed new outfall.

The environmental impacts of the proposed storm drain facilities are further described an analyzed in Section 3.9 Hydrology and Water Quality.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The 2012 Project would not exceed water supplies available from existing entitlements and resources. Existing EBMUD water entitlements and resources would be adequate to serve the 2012 Project.

Under the 2012 Project, new development would be served via connections to the EBMUD water distribution system. As shown in Table 3.17-2, the 2012 Project would generate an average day flow of approximately 136,993 gallons per day (gpd), and would have a maximum flow of approximately

410,980 gpd. The average day flow from the 2012 Project would represent approximately 0.04 percent of EBMUD's 2040 water demand, and 0.06 percent of the 2040 water demand with the successful completion of water recycling and conservation programs.

Table 3.17-2: 2012 Oakland Army Base Estimated Water Demand

Land Use	Total Square Feet or Number of Facilities	Average Day Water Demand Rate	Average Day Flow Water Demand (gpd)	Maximum Day Flow Water Demand [a]
Research and Development (Office Building) [b]	90,000	273 gpd/1,000 sq. ft	24,570	73,710
Warehousing [c]	1,972,104	29 gpd/1,000 sq. ft	57,191	171,573
Recycling and Reprocessing Facilities [d]	2 facilities	48,000 gpd/facility (Recycling) 2,900 gpd/facilit (Reprocessing)	50,900	152,700
Truck Services [e]	37,673	115 gpd/1,000 sq. ft	4,332	12,996
Total	**2,445,477**		**136,993**	**410,980**

Note: gpd = gallons per day, sq. ft. = square feet
[a] Maximum day flow water demand = 3.0
[b] Average day water demands for office building is taken from the water demand tables provided by EBMUD for this analysis.
[c] Average day water demands for warehousing assumed to be 115 percent of the sewage generation rates used.
[d] Average day water demands for reprocessing is from data supplied by Custom Alloy Scrap Sales (CASS). Average day water demands for recycling is from data supplied by California Waste Solutions.
[e] Average day water demands for truck services assumed to be 115 percent of the sewage generation rates used.

Source: Oakland Global and Ruggeri-Jensen-Azar, 2012.

Under the 2002 Redevelopment Plan, water demand in the OARB sub-district was estimated to be approximately 614,000 gpd. The City sought re-confirmation of the 2002 Water Supply Assessment (WSA) for the OARB portion of the 2002 Redevelopment Plan from EBMUD (See Appendix C for the Satisfaction of Water Supply Consultation for the 2012 Project letters). In the letter to EBMUD, the City revised the water demand for the OARB sub-district, using water demand categories included in the 2002 WSA. Under this scenario, the estimated revised water demand was approximately 145,000 gpd. EBMUD reviewed the water demand projection for the OARB sub-district and estimated the water demand to be approximately 440,000 gpd, which is less than the original water demand of the OARB sub-district under the 2002 Redevelopment Plan. Table 3.17-2 reflects the most up-to-date estimated water demand for the proposed project. The maximum day flow water demand of approximately 410,980 gpd for the proposed project is still less than EBMUD's estimated water demand (440,000 gpd) for the OARB sub-district. Therefore, the estimated water demand rate is below the water demand assessed by EBMUD in 2002 and 2012.

The system-wide demand for water in EBMUD's service area is evaluated and planned for in the District's 2010 Urban Water Management Plan. According to the 2010 Urban Water Management Plan, EBMUD has sufficient water rights to meet the demand through 2040 during normal years. However, under drought conditions, EBMUD would not have sufficient water supply to serve all demands within its service boundary. Implementation of EBMUD's Drought Management Program and Mitigation Measures 4.9-4, 4.9-5, and 4.9-6, would ensure the use of recycled water on the 2012 Project site and substantially reduce demand for potable water during critical water supply events,

consistent with EBMUD policies. In addition, implementation of SCA UTL-1, compliance with the City's Green Building Ordinance would further reduce this impact. Compliance may include the incorporation of water-efficient landscaping; the installation of water-efficient equipment such as water-conserving toilets, showerheads, and faucet aerators; or other design or technologies that would reduce water demand.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to water supply than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.9-4, 4.9-5, and 4.9-6

2012 Mitigation: 2002 EIR Mitigation Measures 4.9-4, 4.9-5, and 4.9-6, supplemented with SCA UTL-1

Significance After Implementation: Less Than Significant (No New Impact)

e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As previously described, with the construction of new wastewater facilities, the EBMUD wastewater treatment plant would have adequate capacity to handle additional flow generated by the 2012 Project. The 2012 Project would generate an average day flow of approximately 101,390 gallons of wastewater per day (gpd), and would have a maximum day flow of approximately 380,212 gpd. Peak wet weather flows would be approximately 904,619 gpd. The average day flow from the 2012 Project represents 0.1 percent of EBMUD's main wastewater treatment plant's average flow of 70 mgd. Both the maximum day flow and the peak wet weather flow from the 2012 Project would represent approximately 0.5 percent and 1.3 percent of EBMUD's main wastewater treatment plant's average flow, respectively.

Although the EBMUD's wastewater treatment plant has adequate dry weather capacity to treat wastewater generated by development projects within EBMUD's service area, inadequate capacity exists during wet weather events. As previously described, the 2012 Project would be subject to Standard Condition of Approval SCA HYD-4 (Stormwater and Sewer), which would require the project applicant to confirm adequate capacity and to fund any necessary sewer infrastructure improvements, including mechanisms to control increases in infiltration/inflow.

The 2012 Project would not be expected to exceed the capacity of wastewater collection and treatment facilities. The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to the capacity of wastewater collection and treatment systems than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA HYD-4 would further reduce impacts related to the capacity of wastewater collection and treatment systems to less-than-significant levels.

Significance After Implementation: Less Than Significant (No New Impact)

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

The 2012 Project would be served by landfills with sufficient permitted capacities to accommodate the solid waste disposal needs of the 2012 Project and would not require or result in construction of new or expanded landfill facilities.

Construction of the 2012 Project would generate construction waste and debris. Construction-generated waste would be removed from the site and disposed of primarily at the Vasco Road Landfill, which is estimated to have sufficient capacity through approximately 2019.

The 2012 Project would be subject to Mitigation Measures 4.9-7, 4.9-8, and 4.9-9, and SCA UTL-2 (Waste Reduction and Recycling). The mitigation measures identified in the 2002 EIR require 1) the project applicant to participate in a deconstruction program to capture materials and recycle them into the construction market; 2) concrete and asphalt during construction activities to be crushed on-site or at a near-site location, and reused in redevelopment or recycled to the construction market; and 3) the submission of a plan that demonstrates a good faith effort to divert at least 50 percent of operations phase solid waste from landfill disposal.

SCA UTL-2 requires the project applicant to submit a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for review and approval by the City's Public Works Agency. Compliance with the WRRP would require at least 50 percent of all construction and demolition debris generated by the 2012 Project to be diverted from landfills. Therefore, construction of the 2012 Project would not contribute a substantial amount of waste to the Vasco Road Landfill such that the capacity of the landfill would be compromised.

During the operational phase of the 2012 Project, types and quantities of solid waste associated with transportation, industrial, and research and development uses would be generated. Using the same analysis of the quantity of solid waste generation, diversion, and disposal identified in the 2002 EIR, the 2012 Project is expected to generate approximately 2,847 tons of waste per year that would require disposal at landfills.

The Altamont Landfill has a permitted maximum daily disposal of 11,500 tons per day. The waste generated by the 2012 Project (approximately 2,847 tons per year, or approximately 7.8 tons per day) would represent far less than one percent of the maximum disposal permitted at this facility. Additionally, SCA UTL-2 requires the project applicant to prepare an Operational Diversion Plan and identify how the project would comply with the City's Recycling Space Allocation Ordinance and

specify the methods by which the project would meet the required diversion of solid waste generated by project operation. Therefore, the landfill would have adequate permitted capacity to accommodate the increase in solid waste disposal.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to the solid waste demand than were described in the 2002 EIR. The 2012 Project would not require or result in construction of landfill facilities or expansion of existing facilities. Therefore, this impact would be less than significant.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.9-7, 4.9-8, and 4.9-9

2012 Mitigation: 2002 EIR Mitigation Measures 4.9-7, 4.9-8, and 4.9-9, superseded by SCA UTL-2

Significance After Implementation: Less Than Significant (No New Impact)

g) Comply with federal, State, and local statutes and regulations related to solid waste?

Because the 2012 Project would be subject to City construction- and operation-period waste-diversion requirements, the 2012 Project would not impede the City of Oakland's ability to meet the waste diversion requirements of AB 939 or the Alameda County Waste Reduction and Recycling Initiative, or cause the City to violate other applicable federal, State, and local statutes and regulations related to solid waste.

As previously identified, the 2012 Project would be subject to Standard Condition of Approval SCA UTL-2 (Waste Reduction and Recycling), which requires the project applicant to submit a WRRP and ODP for review and approval by the City's Public Works Agency. The WRRP must specify the methods by which construction and demolition waste generated by the 2012 Project would be diverted from landfill disposal in accordance with City requirements and would be expected to divert at least 50 percent of construction-period waste from landfills. The ODP must identify how the 2012 Project would comply with the City's Recycling Space Allocation Ordinance methods by which the project would meet the required diversion of solid waste generated by project operation. Therefore, the 2012 Project would be in compliance with statutes and regulations related to solid waste.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: 2002 EIR Mitigation Measures 4.9-7, 4.9-8, and 4.9-9

2012 Mitigation: 2002 EIR Mitigation Measures 4.9-7, 4.9-8, and 4.9-9, superseded by SCA UTL-2

Significance After Implementation: Less Than Significant (No New Impact)

h) Would the project violate applicable federal, state and local statutes and regulations relating to energy standards?

The 2012 Project would not violate statutes or regulations relating to energy standards. Development allowed by the 2012 Project would be required to comply with the standards of Title 24 of the California Code of Regulations, Condition of Approval SCA UTL-1 (Compliance with the Green Building Ordinance), and would be subject to City-wide energy efficiency requirements that were or would be adopted as part of the City of Oakland sustainability programs and the Draft City of Oakland Energy and Climate Action Plan. Additionally, the 2012 Project includes sustainable design concepts such as energy efficient building design, central plants for heating and cooling with inter-connected hot and chilled water distribution systems, an energy monitoring system to verify and promote the success of energy efficiency designs, and recycled water for landscape irrigation and/or toilet flushing. Therefore, the impact of the 2012 Project on applicable energy standards would therefore be less than significant.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA UTL-1 would further reduce impacts related to applicable energy standards to less-than-significant levels.

Significance After Implementation: Less Than Significant (No New Impact)

i) Would the project result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects?

New underground electrical systems and gas distribution pipes would be constructed as part of the 2012 Project since much of the existing infrastructure on the project site is old, in disrepair and inadequate to serve the level and type of development proposed. Power would be provided by either the Port or PG&E, depending on capacities and commitments of both providers and preliminary project planning has been undertaken to accommodate either source. The 2012 Project also would include sustainable design concepts such as energy efficient building design, central plants for heating and cooling with interconnected hot and chilled water distribution systems, an energy monitoring system to verify and promote the success of energy efficiency designs.

Currently, the Port has adequate power for the 2012 Project, but other adjoining users, not part of the 2012 Project, could demand more electricity than the Port's total output in which case an additional substation may be required on the project site. A new power source for such a substation would be required and the routing for this source, outside the project site, has not been determined.

Because construction activities associated with new or expanded energy facilities are to be located within construction areas already subject to widespread ground disturbance on the project site, the removal, installation, and replacement of existing energy facilities would not cause significant envi-

ronmental effects that have not already been identified in the 2002 EIR and this Initial Study. Therefore, this impact would be considered less than significant.

As shown in Figure 3.17-3, as part of the 2012 Project, electrical services would be provided as part of the utility corridor along Maritime Street, 14th Street and Burma Road. The existing Davis, 14th Street, and Cuthbertson substations would be retained. Gas service would be delivered by new underground gas piping extending back to existing and new gas mains throughout the project site. It is anticipated that new gas distribution lines would be installed in utility corridors and the capacities of existing gas mains would not increase due to the relatively low demands generated from the proposed uses.

The 2002 EIR included the estimated electricity consumption for the entire Redevelopment Plan area as 4.4 megawatts; however estimated electricity consumption for each sub-district was not specified. Additionally, the 2002 EIR did not include estimated natural gas consumption rates.

The 2012 Project would create a demand for approximately 98,052 megawatt hours of electricity per year[192,193] and approximately 82,639,400 kilo British Thermal Units (kBTU) of natural gas per year. As previously described, the 2012 Project would be subject to Condition of Approval SCA UTL-1 (Compliance with the Green Building Ordinance), City-wide energy reduction and sustainability strategies, including those outlined in the City of Oakland Energy and Climate Action Plan, that would further reduce the energy demand of the project and the need to build new energy facilities or expand existing facilities.

The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project. The 2012 Project would not result in any new or more significant impacts related to the construction of new energy facilities, such that the construction would cause significant environmental impacts, than were described in the 2002 EIR.

2002 Impact: Less Than Significant

2012 Impact: Less Than Significant

2002 Mitigation: No Mitigation Warranted

2012 Mitigation: No Mitigation Warranted; Implementation of SCA UTL-1 would further reduce impacts related to energy facilities to less-than-significant levels.

Significance After Implementation: Less Than Significant (No New Impact)

3.17.6 CUMULATIVE IMPACTS

The geographic scope for assessing the potential for cumulative utilities impacts consists of the service areas of the agencies providing services to the 2012 Project area. The Existing Conditions

[192] AECOM. 2011. Memorandum to James Heilbronner, Architectural Dimensions, December 14.

[193] The proposed project may also include solar panels on 50 percent of the roofs. The AECOM Memorandum to James Heilbronner notes that it would be possible for these solar panels to produce about one-fifth of the power consumed by the new project development.

subsection above describes past, present, and foreseeable future conditions in these area. The following discussion evaluates the potential for cumulative impacts.

3.17.6.1 Water Supply

For water service, the geographic scope for assessing cumulative impacts is the EBMUD service area. The 2012 Project, in conjunction with other past, present, and reasonably foreseeable future projects, could result in a cumulative increase in demand for water services. However, as previously identified, demand from the 2012 Project would not exceed available water supplies or require construction of new or expanded water facilities of which could cause significant environmental impacts.

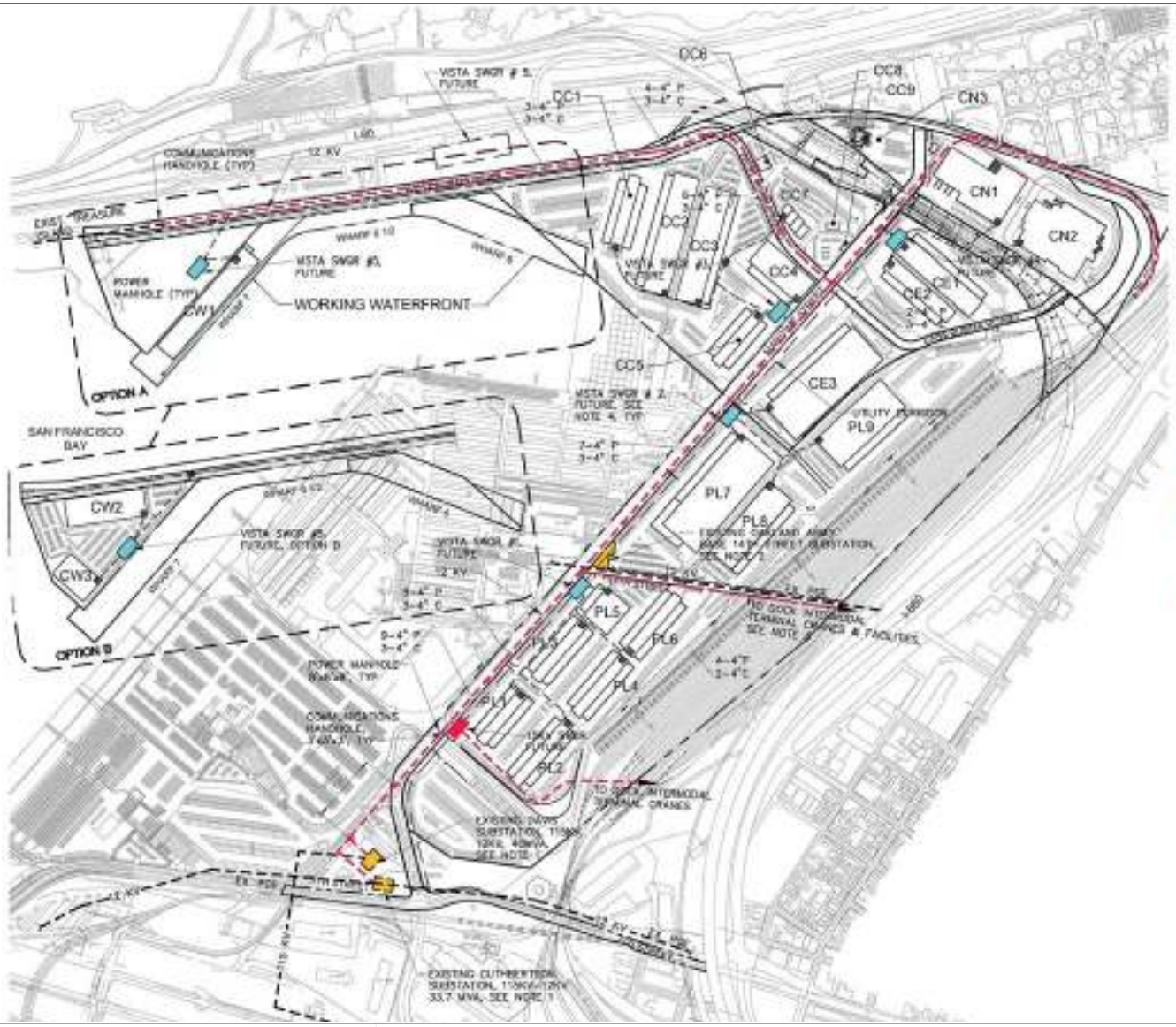
The cumulative demand for water in EBMUD's service area is evaluated and planned for in the EBMUD 2010 Urban Water Management Plan. According to the 2010 Urban Water Management Plan, EBMUD estimates that water demand will increase to approximately 230 mgd by the year 2040 (from the 2010 demand of 174 mgd), taking into account the implementation of planned water recycling and conservation programs. While the demand for water in 2040 could be accommodated by EBMUD's water rights during normal and above-normal water years, these water rights would not be adequate to satisfy water demand during dry years. To address this shortfall, EBMUD would implement a Drought Management Program during a single-dry year. Additionally, EBMUD is currently updating its Water Conservation Master Plan (WCMP) to include existing and planned efforts in support of meeting long-term water conservation planning goals through the year 2040.

Additionally, all cumulative projects would be required to comply with City ordinances and policies regarding water supply, as well as water conservation measures, and wherever feasible, participate in water recycling programs established by EBMUD to address effects of severe drought. Therefore, the cumulative impact of past, present, and reasonably foreseeable projects on water supply would not be significant, and the 2012 Project would not make a significant contribution to this impact.

The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project and would not result in any new or more significant cumulative impacts related to water supply and service than were described in the 2002 EIR. Therefore, the 2012 Project would not result in or contribute to any significant cumulative water supply and service impacts.

3.17.6.2 Wastewater

For wastewater services, the geographic scope for assessing cumulative impacts is the City of Oakland (for wastewater collection) and the EBMUD service area (for wastewater treatment). The 2012 Project, in conjunction with past, present, and reasonably foreseeable future projects, could result in a cumulative increase in wastewater generation, resulting in increased demand on wastewater collection and treatment facilities. However, it is not anticipated that the wastewater demands of the 2012 Project combined with past, present, and reasonably foreseeable future projects in Oakland would exceed City 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.



LSA

FIGURE 3.17-3

NEW ELECTRICAL/ COMMUNICATION FACILITY
EXISTING FACILITY
VISTA SWITCHGEAR
EXISTING SUBSTATION
UTILITY CORRIDOR
480V SWITCHBOARD, INDOOR TYPE (TYP.)
15KV SWITCHGEAR

N

0 600 1200
FEET

SOURCE: AECOM, 2011.

2012 Oakland Army Base Project
Electrical Utility Area Plan

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The 2012 Project would generate an average day flow of approximately 101,390 gpd and would have a maximum day flow of approximately 380,212 gpd. Peak wet weather flows would be approximately 904,619 gpd. As previously identified, the 2012 Project would be subject to Standard Condition of Approval SCA HYD-4 (Stormwater and Sewer), which would require the project applicant to confirm adequate capacity and to fund any necessary sewer infrastructure improvements, including mechanisms to control increases in infiltration/inflow. Other cumulative projects would also be subject to SCA HYD-4 and applicable wastewater fees and therefore would not result in a significant cumulative impact to wastewater capacity.

Other wastewater facilities in the EBMUD service area also may be at or near capacity, and cumulative projects could result in overflows. However, such projects would also be subject to similar measures requiring upgrades to sewer infrastructure and therefore would not result in significant cumulative impacts.

Although the EBMUD wastewater treatment plant has adequate dry weather capacity to treat wastewater generated by cumulative projects (annual average flow is 70 mgd and the plant provides secondary treatment for up to 168 mgd and primary treatment for up to 320 mgd), inadequate capacity exists during wet weather events. As previously identified, wastewater infrastructure improvements would be required as part of the 2012 Project; the 2012 Project would not make a significant contribution to cumulative impacts to wastewater discharges or the overall wastewater system.

Overall, the effect of the 2012 Project on the need for new or expanded wastewater facilities, in combination with other past, present, and reasonably foreseeable projects, would be less than significant. The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project and would not result in any new or more cumulative significant impacts related to wastewater capacity and service than were described in the 2002 EIR. Therefore, the 2012 Project would not result in or contribute to any significant cumulative wastewater service impacts.

3.17.6.3 Stormwater

Please refer to Section 3.9, Hydrology and Water Quality, for discussion of cumulative storm drainage impacts.

3.17.6.4 Solid Waste

For solid waste disposal service, the geographic scope for assessing cumulative impacts consists of the service areas of the Altamont and Vasco Road Landfills. The 2012 Project, in conjunction with past, present, and reasonably foreseeable 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.

Construction-generated waste would be removed from the site and disposed of primarily at the Vasco Road Landfill, which is estimated to have sufficient capacity through approximately 2019. The 2012 Project would be subject to Standard Condition of Approval SCA UTL-2 (Waste Reduction and Recycling), which requires the project applicant to submit a Construction and Demolition WRRP for review and approval by the City's Public Works Department. Similar requirements would be imposed on other cumulative development projects. Therefore, construction of the 2012 Project would not

result in a significant cumulative reduction in the capacity of the Vasco Road Landfill. Standard Condition of Approval SCA UTL-2 (Waste Reduction and Recycling) also requires the preparation of an Operational Diversion Plan for the operational phase of the 2012 Project. Implementation the Operational Diversion Plan would be expected to reduce operational-period waste generation associated with the 2012 Project, in compliance with AB 939. Other cumulative development projects would be required to implement similar waste reduction measures, reducing the overall cumulative effect on landfill capacity.

Therefore, the effect of the 2012 Project on landfill capacity, in combination with other foreseeable projects, would be less than significant. The 2012 Project includes redevelopment of the project site at a similar scale as the 2002 Project and would not result in any new or more significant cumulative impacts related to landfill capacity and solid waste disposal service than were described in the 2002 EIR.

3.17.6.5 Energy and Telecommunications

For electrical and natural gas services, the geographic scope for assessing cumulative impacts is PG&E's northern and central California service area. Despite annual statewide increases in energy consumption, the net increased energy demand generated by the 2012 Project, combined with other past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact. Urbanized portions of City of Oakland are already served by gas and electricity infrastructure, and the net increased energy demand from reasonably foreseeable 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. Of the energy provided to PG&E customers in 2010, approximately 16 percent came from renewable resources. In 2010, 24 percent of energy provided to PG&E customers came from nuclear generation; 23 percent came from unspecified sources; 20 percent from natural gas; 16 percent came from large hydroelectric facilities; 16 percent came from renewable resources (e.g., wind, geothermal, biomass, and small hydroelectric sources); and 2 percent came from coal and other fossil fuels.[194]

The Port adopted a Renewable Energy Resource Procurement Plan in December 2011 to increase reliance on renewable energy sources. In this program, the Port commits to make reasonable progress towards achieving renewable energy goals of 20 percent, 25 percent, and 33 percent by 2013, 2016, and 2020, respectively.

Because many agencies in California, including the City of Oakland, 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. In addition, the 2012 Project and all cumulative projects would be required to comply with all standards of Title 24 of the California Code of Regulations, Standard Condition of Approval UTL-1 (Compliance with Green Building

[194] PG&E, 2012. Clean Energy Solutions. Website: www.pge.com/mybusiness/environment/pge/cleanenergy/index.shtml (accessed February 17).

Ordinance), and City-wide energy reduction measures, such as those outlined in the City of Oakland Energy and Climate Action Plan.

The effect of the 2012 Project on energy services, in combination with other past, present, and foreseeable projects, would be less than significant. The 2012 Project includes redevelopment of the Army Base at a similar scale as the 2002 Project and would not result in any new or more significant cumulative impacts related to energy services than were described in the 2002 EIR. Therefore, the 2012 Project would not result in or contribute to any significant cumulative energy service impacts.

3.17.7 CONCLUSIONS

Redevelopment of the Army Base would not result in significant new utilities impacts or a substantial increase in the severity of previously identified utilities impacts compared to the 2002 EIR. Therefore, impacts would be similar or less than to those addressed in the 2002 EIR, and would continue to be less than significant. Previously imposed mitigation measures from the 2002 EIR have been identified and, where appropriate, have been clarified, refined, revised, or deleted. No new mitigation measures are required.

3.17.8 REFERENCES

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